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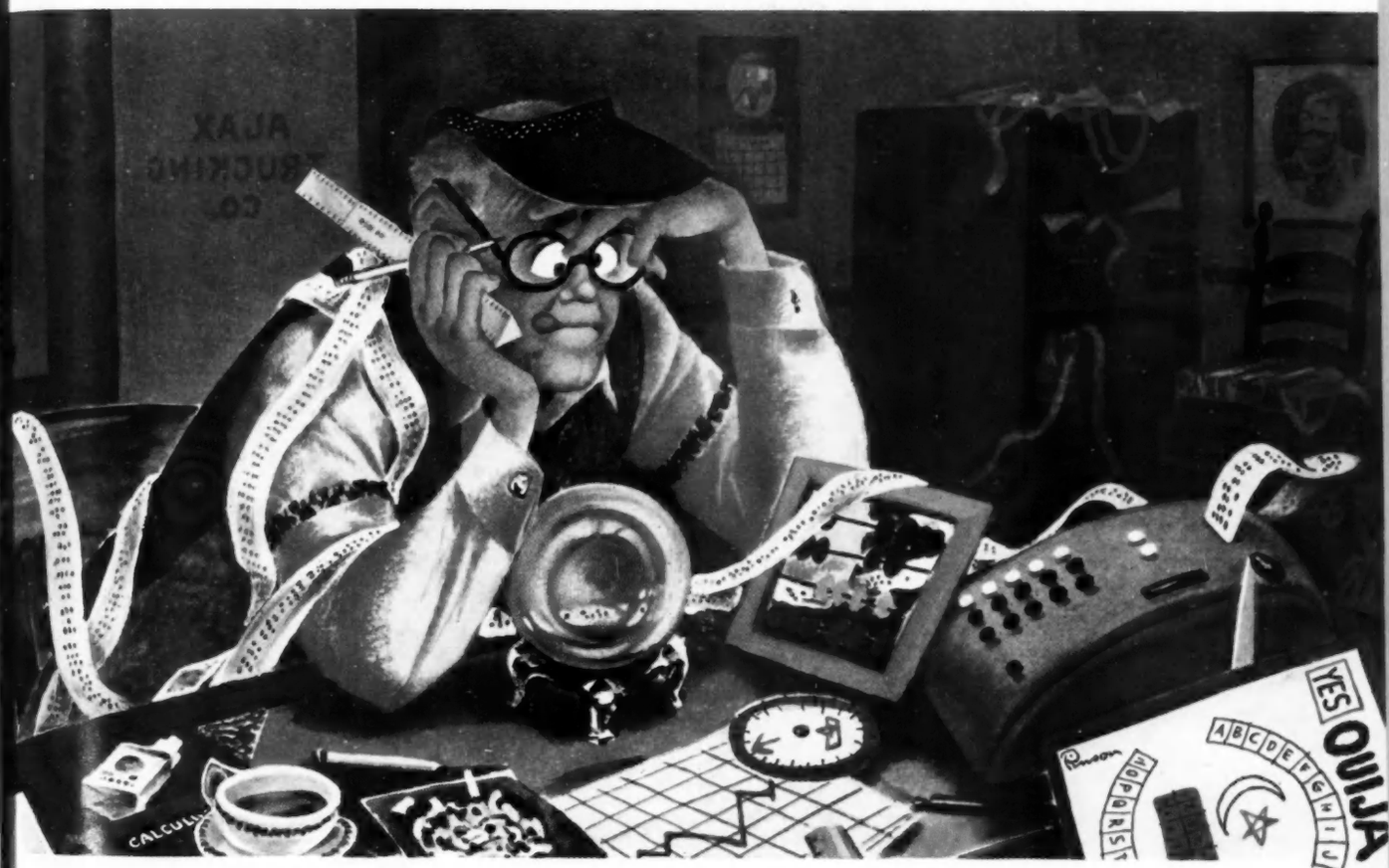
THE MAGAZINE FOR TRUCK AND BUS FLEET OPERATORS



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Here's why new Dodge *"Job-Rated"* trucks mean "A better deal for the man at the wheel." Drivers enjoy more comfort, better visibility, greater driving ease—advantages that step up safety, efficiency, and job satisfaction. New Dodge trucks mean a better deal for the man who pays the bills, too! The Dodge *owner* gets:

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A better deal in power with famous Dodge 6's and the most powerful V-8's in the popular field. Hemispherical combustion chamber in V-8's gives high efficiency. See your friendly Dodge dealer.

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Hear "The Roy Rogers Show" on radio (NBC, Thursdays) • Enter the Dodge 40th Anniversary All-America Contest. See your dealer.

NEW! Even greater value . . . yet still priced with the lowest **DODGE "Job-Rated" TRUCKS**

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THRU SAVINGS WITH

ALUMINUM ALLOY BODIES!

Cross excessive body denting off your delivery expense by using *thick* aluminum alloy bodies — ⅛" thick in the side panels, rub rails, skirts, rear panels, and floors of Olson Kurb-Sides. *That's one thing that "satisfaction and money back thru savings"* means.

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Ask your Chevrolet, Ford or GMC dealer to show you an Olson Kurb-Side unit. Also ask him for a free sample of the ⅛"-thick heat-treated aluminum alloy we use, so that you can see what you get for your money compared with the thin sheet steel of other bodies. No time like now to save money in deliveries.

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JOURNAL

CCJ READER DIGEST

What, Where, How Accidents Happen

An analysis adapted from fleet reports in the National Safety Council's 1952-53 Fleet Safety Contest presented as an aid to help others improve the accident picture. Six charts show the object involved, the location and the type of accident in this summary of 940 urban and 481 intercity fleet accidents. Page 64.

You Don't Have to be Big to be Good

Lee & Eastes is an important freight hauling fleet but is relatively small in size in the Pacific Northwest where big fleets are common. On his recent western trip, COMMERCIAL CAR JOURNAL's Editor Bart Rawson took a look at its shop in Seattle, Wash., reports it has everything the big fleets have and in some cases more. Page 68.

Engineers Discuss Brakes, Engines and Fuel

Here is a special three part report for fleetmen from the record breaking Annual Meeting of the Society of Automotive Engineers held last month in Detroit. First section summarizes topics of top fleet interest. Page 72.

In the second, "Engine Head and Gasket Problems," L. E. Kassebaum of Consolidated Freightways says poor fuels, engine lugging, careless use of starting fluid and careless maintenance can result in gasket failure. Page 73.

Third feature, "How to Stop a Truck—Safely," takes a look at brake troubles. In it, Bendix-Westinghouse Air Brake Co. Chief Engineer Stephen Johnson tells about time and pressure balancing. And Ralph K. Super, Timken-Detroit Axle Division, Rockwell Spring and Axle Co., explains the need to maintain at 100 per cent efficiency. Page 74.

The How and Why of Better Bearing Maintenance

L. Schamadan, Field Engineer, Cleveland Graphite Bronze Co., describes how overheating, engine overloading and careless fitting practices accelerate bearing wear. He also includes important tips on how to improve fleet bearing mileage. Page 78.

Shop Built Tools Cut Maintenance Man Hours

We put everything but the men's room on wheels when we made this series of seven maintenance aids from scrap parts, says Seymour Steiner, Maintenance Superintendent, Myer 1890 Bottling Co. They provide flexibility and speed, he adds. Page 80.

Fleet Built Plastic Bodies Can Take It

Seaboard Transportation Co., Antioch, Cal., is hauling 76,800 lb GTW over snow covered mountains and across the desert in fiber glass reinforced plastic trailers. They are built quickly and easily in the fleet's own shop. Seaboard General Manager Morris Snyder tells how. Page 82.

THERE'S NO SUCH THING AS NORMAL CONDITIONS IN THE FLEET BUSINESS

A BLUE STREAK headlight relay can make quite a difference on a night like this (or on any night for that matter). Increases light output of headlight beams from 30 to 100%, *even on new lights*, without using additional juice, by sending the current directly from the battery to the headlights. Just be sure to ask for "BLUE STREAK", the *original* headlight relay. It has extra heavy-duty windings, heavier contacts, heavy terminals, and the fuses are located outside the metal case for easy accessibility. BLUE STREAK headlight relays on your trucks help to prevent accidents during those long winter nights on the road. Standard Motor Products, Inc., 37-18 Northern Boulevard, Long Island City 1, N. Y.

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Even on a comparatively inexpensive item like batteries you can save a lot of money — if you know how.

The Goodyear Battery Maintenance Plan will show you how by eliminating the biggest cause of battery wear and failure—incorrect voltage regulation. The plan is simple to set in motion and maintain. And it can prolong the life of every battery in your fleet.

What's more, by using the Goodyear Battery Maintenance Plan you'll increase the life of every unit in your electrical system.

If you're interested in lower cost per mile, you'll want the whole story. You'll find it in a booklet called the Goodyear Fleet Battery Maintenance Manual. Clip the coupon below and send for it today. It's free.

Goodyear, Battery Department, Akron 16, Ohio

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The OVERLOAD

EDITORIAL COMMENT

Highway Bottlenecks—Our No. 1 Priority Problem

REGULAR readers will recall that last month on this page we sounded off rather vigorously on the creeping paralysis of the toll road phobia. Near the end we reiterated our firm conviction that there are few *major flaws* in our nation's highway system. Instead there are *bottlenecks*—some of them extremely serious—but virtually all of them correctable. It was this comment that kept coming to mind as we headed south last month on a 3000-mile journey through seven southeastern states.

Is the highway system in as big a mess as some would like us to believe? Must the solution lie in the excessive cost of toll roads? Or is the trouble confined to a series of bottlenecks that proper highway planning can correct at minimum cost?

Right away let's admit that 3000 miles is only a tiny fraction of the nation's primary highway system. But coupled with other trips through 40 states in the last few years, it gives us a representative sampling of highway conditions. A few specifics will illustrate our point of view.

Throughout most of the journey our speed was governed solely by conscience and the speedometer. At all hours of the day or night, weekdays and weekends, it was perfectly possible to cruise most of the way at 70 mph, should the law allow. It seems hard to believe that such conditions spell total ruin.

Of course there were bottlenecks! Some were real; some artificial—such as the several points where zealous town fathers have posted a 20 mph speed limit on a four-lane divided highway *before* and *after* it leads through a congested area.

Some were short and could easily be corrected. Others were long and serious, such as the whole of Route 17 through Georgia where the surface is poor and where every bridge is posted for 6000 lb despite a 53,900 lb GCW legal limit. But we noted many signs of progress here and on other Georgia highways. With due apologies to the state's chamber of commerce, we also noted that much of its highway system is on built-up land through swamp areas. It's a knotty problem.

But then we kept asking questions like these:

Why must the city of Petersburg, Va., still take all of Route 1 volume through one of the most amazing traffic corkscrews in all history while a by-pass at Fredericksburg—just a few miles south—has erased that city from the through travellers' map?

Or why does the city of Brunswick, Ga., funnel Route 17 traffic on a giant "U" through the heart of its downtown area? Mercifully, trucks are given the highsign to an obvious short cut that saves about a mile in distance and many minutes of congested traffic time.

Many more examples could be cited in even this relatively small section of the USA. But they all add up to the fact that we need careful study and careful planning before going off half-cocked.

Since the fleet operator has the most at stake—in terms of the good old U. S. dollar, he is the man who should be doing the most to promote systematic planning and positive corrective action in each of the states through which his routes pass. Are we all doing our share?

Bart Rawson
Editor

HOW TO CUT

TUNE IN:
METROPOLITAN OPERA
radio broadcasts
every Saturday afternoon.
See newspaper for
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TEXACO

TEXACO

At Your Service

TIMELY NOTES ON MAINTENANCE AND OPERATION

by **MURRAY SIMKINS** Managing Editor

New Battery May Be On Way

A NEW type of storage battery using nickel cadmium cells of a special sintered plate type promises several advantages which may make it adaptable to the automotive field. It is smaller by half than a standard battery. It is said to be invulnerable to shock and vibration, and requires only a few drops of water a year. This battery uses an alkaline solution instead of acid and is not subject to damage from overcharging or short circuiting.

The electrolyte used is potassium hydroxide which has a freezing point of approximately minus 75 deg. It is said that a full charge can be reached in half an hour. It can stand indefinitely in a discharged condition without suffering damage.

Developed by Sonotone Corp., the battery will also be produced by Bosch Corp. and Canadian Aviation Electronics, Ltd., for commercial use.

Transmission Oil Slinger—IHC

LUBRICANT leakage at the transmission mainshaft rear bearing retainer has been overcome by adding an oil slinger and lubricant drain back hole on F-51 and F-51-C model transmissions. International Harvester trucks affected are the R-170, R-180, R-185 and RF-170 series models.

If your transmissions were not originally equipped with the oil slinger and lubricant drain back hole, you may incorporate this improvement by adding the oil slinger and drilling a ⅜-in. diameter lubricant drain back hole in the transmission case below the main shaft rear bearing. Part number of the new oil slinger is I.H. 112 689-R1.

For Better Brake Drum Checks

A PROGRAM for better control of brake drum tolerances in passenger cars and light trucks was outlined recently by John Creamer, of Wheels, Inc. He condemned the dangerous practice of excessive machining of brake drums and suggested an overall industry standard which will be developed by a committee set up for that purpose.

It was suggested that brake drums worn or machined more than 0.030 in. on the inside radius or 0.060 on the inside diameter should be disqualified for further use in the interest of safety. The National Wheel and Rim Assn. has introduced a simple drum check gage which will go a long way toward helping fleetmen and jobbers to obtain a quick measurement.

The calibration marks at each inch of drum diameter are actually 0.060 in. over the size of the original inside diameter. Thus, if the graduation marks are seen after the gage is extended inside the drum, the drum is worn beyond safe use. So the mechanic can quickly determine drum condition.

The gage is inexpensive (52 cents plus postage) and is available either through local jobbers or from the Association at 208 West St. Clair Ave., Cleveland, Ohio.

To Control Condensation—IHC

THE rear axle vent should be kept free of dirt so the vent cap can move freely. A pass or two around the vent with a wire brush will do the job. Water coming from the body or other sources should not fall directly on the vent or some of the water may be taken into the axle carrier and contaminate the lubricant.

Exhaust pipe openings should not be permitted to blast directly on the rear axle housing as this can and will produce a condition very favorable to condensation and the resultant damage to bearings and gearing.

IHC Service Data

INTERNATIONAL Harvester Co. is providing a new service to owners of IHC trucks with a new series of "Fleet Service News Letters." This information will be in short, concise form, containing both service information and notes of general interest. They will replace the "R" series of service bulletins.

Torque Your Spark Plugs

YOU may actually experience preignition from improper setting of the spark plugs. When the gasket is not compressed tightly enough, improper installation may not permit transfer of the heat from the electrode to the cylinder head. As a result the tip may get hot enough to ignite the air-fuel mixture, with preignition occurring.

While torque wrenches are definitely recommended, the following expedient may be resorted to when one

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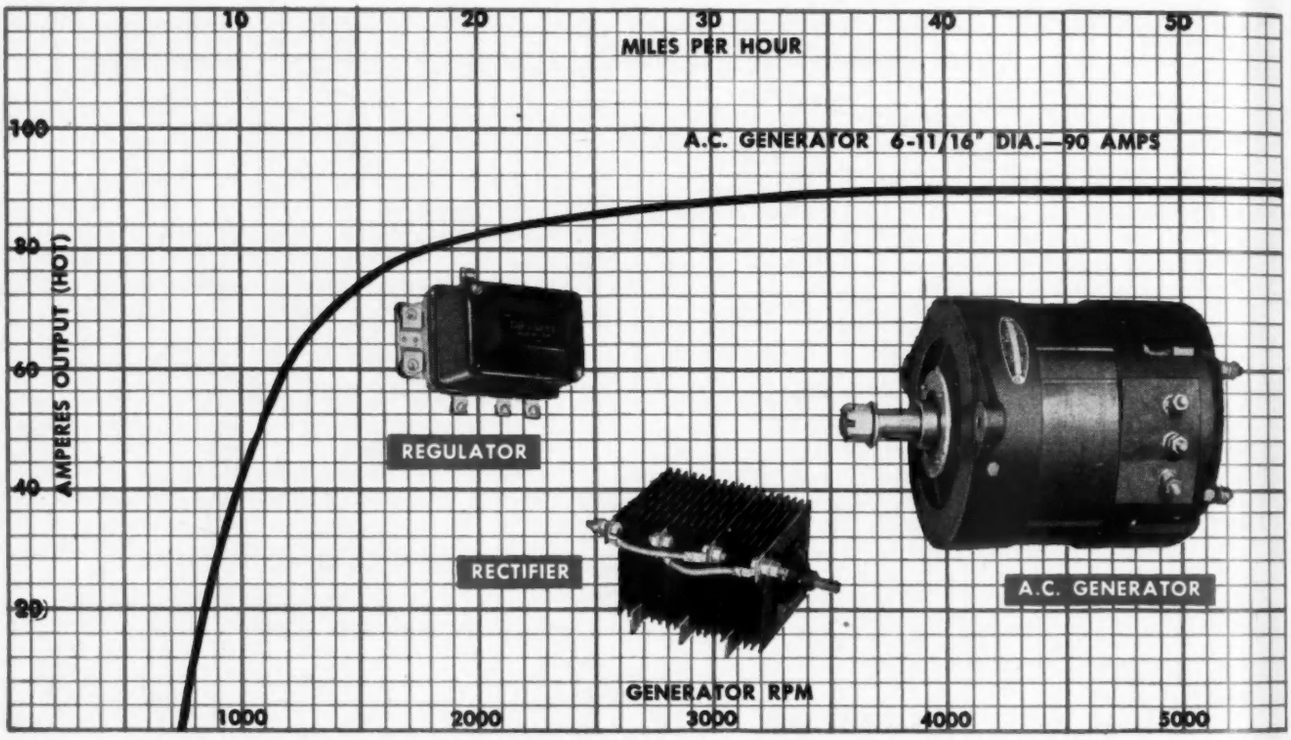
Power Packed and

HERE'S THE A.C. ANSWER TO EXTRA-HEAVY ELECTRICAL DEMANDS



DELCO-REMY

A. C. Generator, Regulator and Rectifier

Here's the answer for "problem" vehicles—Delco-Remy's new long-lived A.C.-D.C. charging system! It's specifically designed to meet the *extra*-heavy electrical demands of police prowl cars, big city taxis, and other vehicles equipped with two-way radio, floodlights or any extra electrical units . . . ample current reserve picks up discharged battery quickly in operation. Delco-Remy A.C. generators are suitable for use at all engine speeds.

With output ranging from 30-40 amperes at curb idle and up to 90 amperes at higher engine speeds, the new Delco-Remy A.C.-D.C. charging system meets all electrical needs under the toughest operating conditions. Included in the new system is the A.C. generator, a matching regulator, and a rugged, dependable dry-plate rectifier which converts generator A.C. output to direct current.

Application packages complete with installation instruction sheets for popular makes of cars and trucks are now available. The conversion job is simple. For further details and application data, see your nearest United Motors distributor.

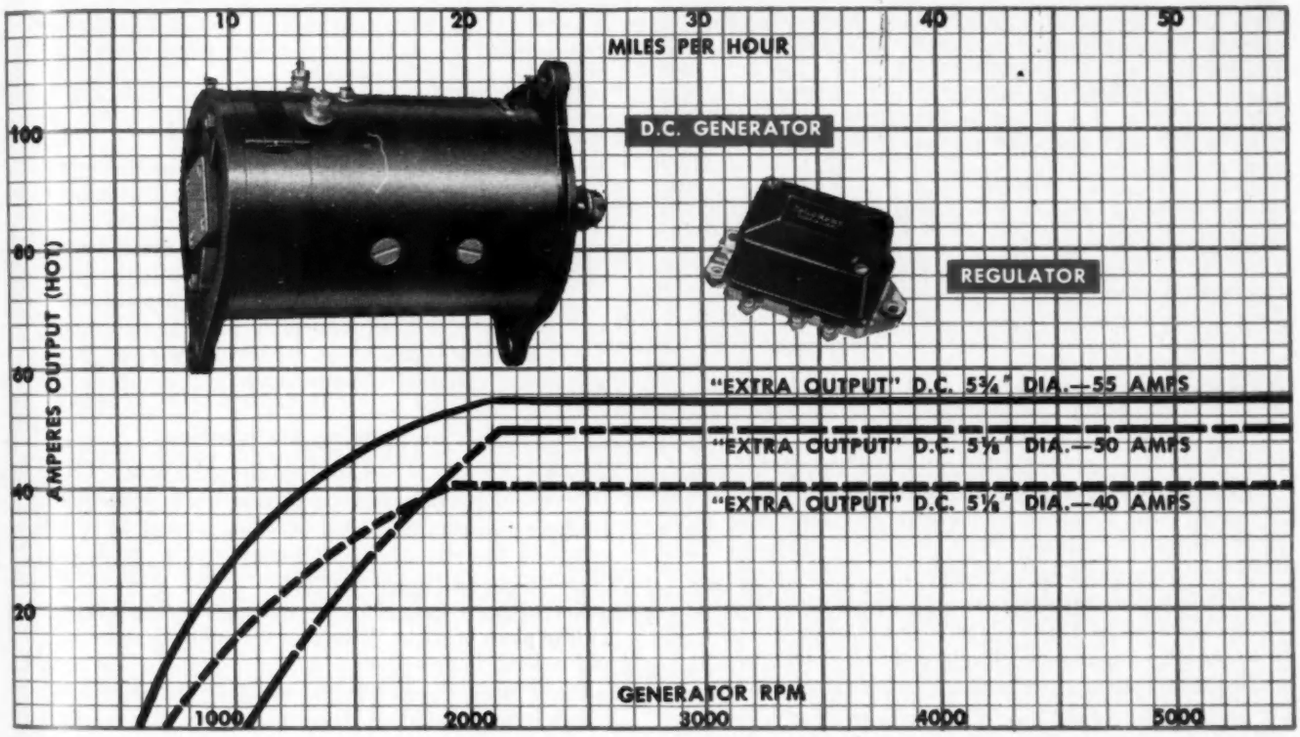
A GENERAL MOTORS PRODUCT — A UNITED MOTORS LINE

DISTRIBUTED BY WHOLESALERS EVERYWHERE

WHEREVER WHEELS TURN OR PROPELLERS SPIN

Right for the Job

HERE'S THE D.C. ANSWER TO HEAVY ELECTRICAL DEMANDS



DELCO-REMY

Extra-Output D. C. Generators and Matching Regulators

Delco-Remy extra-output D.C. generators are an economical answer to the electrical needs of cruising taxicabs, suburban police cars, rural mail cars . . . other vehicles with additional lights, two-way radios, or other special electrical equipment in medium to heavy-duty service. Delco-Remy extra-output D.C. generators are low in cost, simple to install, economical to maintain.

DELCO-REMY 40-AMP GENERATOR, has low cut-in, about 7 mph, charges from 11 to 17 amperes at curb idle . . . full output about 18 mph —for vehicles customarily used in heavy traffic.

DELCO-REMY 50-AMP GENERATOR has slightly higher cut-in, about 11 mph . . . full output about 21 mph—for vehicles customarily operated at higher speeds, with minimum slow driving.

DELCO-REMY 55-AMP GENERATOR has very low cut-in, about 6 mph; charges at curb idle from 20 to 30 amperes . . . attains full output at 20 to 25 mph—for vehicles customarily operated at low speeds with added electrical loads, such as city taxicabs and police cars.

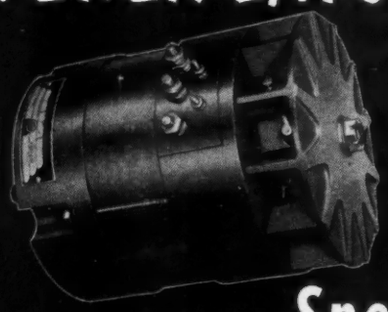
For further details and application data, see your nearest United Motors distributor.

Delco-Remy

DIVISION, GENERAL MOTORS CORPORATION, ANDERSON, INDIANA

WHEREVER WHEELS TURN OR PROPELLERS SPIN

FOR MORE RUNS
FEWER LAYUPS



Specify
Leece-Neville
Alternators

Over 7 years of fleet performance has proved the unmatched reliability of L-N Alternators. Many of them have run 500,000 miles and more with only routine maintenance. With 25 to 40 amps at idle and high output at all speeds, L-N Alternators carry the entire electrical load, leaving batteries for starting only. Think what this freedom from electrical breakdown can mean for your fleet! There are 6-volt L-N Alternator Systems of 50 and 95 amps capacities; 50 to 150 amps for 12 volts. Be sure to specify L-N.

Out front over 43 years

Since 1909 Leece-Neville has been in the forefront of invention, development and perfection of automotive electric equipment. The *first* generators and cranking motors used as standard equipment on automobiles were built by Leece-Neville, who also brought out the *first* third-brush generator. Today, with outstanding engineering and production facilities, L-N is the acknowledged leader in design and manufacture of special and heavy-duty electric units. The Leece-Neville Company, Cleveland 14, Ohio.

YOU CAN RELY ON Leece-Neville

ALTERNATOR SYSTEMS • GENERATORS
CRANKING MOTORS • REGULATORS
SWITCHES • SMALL MOTORS

TRUCK BUS DIESEL OFF-HIGHWAY
PASSENGER RAILROAD MARINE INDUSTRIAL

CCJ At Your Service

Continued from Page 9

is not immediately available: First tighten the plug with the fingers. Then pull down with a socket wrench: 18 mm plugs—½ to ¾ turns; 14 mm plugs—¾ turn; 10 mm plugs—¾ to 1 turn.

Heavy-Duty Switches Best

IN PURCHASING switches for various electrical circuits, the operator should keep in mind that heavy-duty types will provide better and longer service. And since installation costs are usually the greatest single cost factor, long life and efficient operation is the first consideration. Consider this. A 10 per cent drop in voltage across a switch can mean a 30 per cent reduction in candlepower of the lamps. Therefore, you may not be able to afford the "cheaper" units.

Tips on Bearing Installation

L. SCHAMADAN, of Cleveland Graphite Bronze Co., recently reviewed some of the most important phases of bearing maintenance. Here is what he suggested in the way of correct procedures in installing main and connecting rod bearings.

Keep Parts Clean—Identify and lay out all parts on a clean piece of paper. Watch for dirt on bearing backs and parting line surfaces.

Use Proper Torque Values—Follow the manufacturer's recommendations. Distortions caused by uneven bolt torques cause trouble. Check the condition of the bolts and bolt head seats in order to be sure that your torque wrench readings are true values of bolt tightness.

Main and Connecting Rod Bore Finishes—A 50 to 80 micro inch finish will provide adequate contact for good bearing performance. This finish is easily obtained by boring.

Measure Oil Clearance—The inside diameter of the bearing, in assembly, can be measured with inside micrometers if dial indicator bore gages are not available. The journal diameter is best measured with micrometers that read in ten-thousandths of an inch.

Plastigage is also used in checking bearing clearances. However, extreme care must be used to eliminate false readings that can be caused by housing bore or main journal misalignment. And, an attempt must be made to use the largest journal diameter, if out-of-roundness exists, when making the check because minimum clearance is the critical condition.

Another widely used method for checking clearance uses brass shims. A shim, shorter than the bearing, and about ¼" wide, should when clamped between the shaft and bearing, allow the shaft to turn easily. A shim 0.001" heavier than the required clearance should lock the shaft from rotation. This check requires ex-

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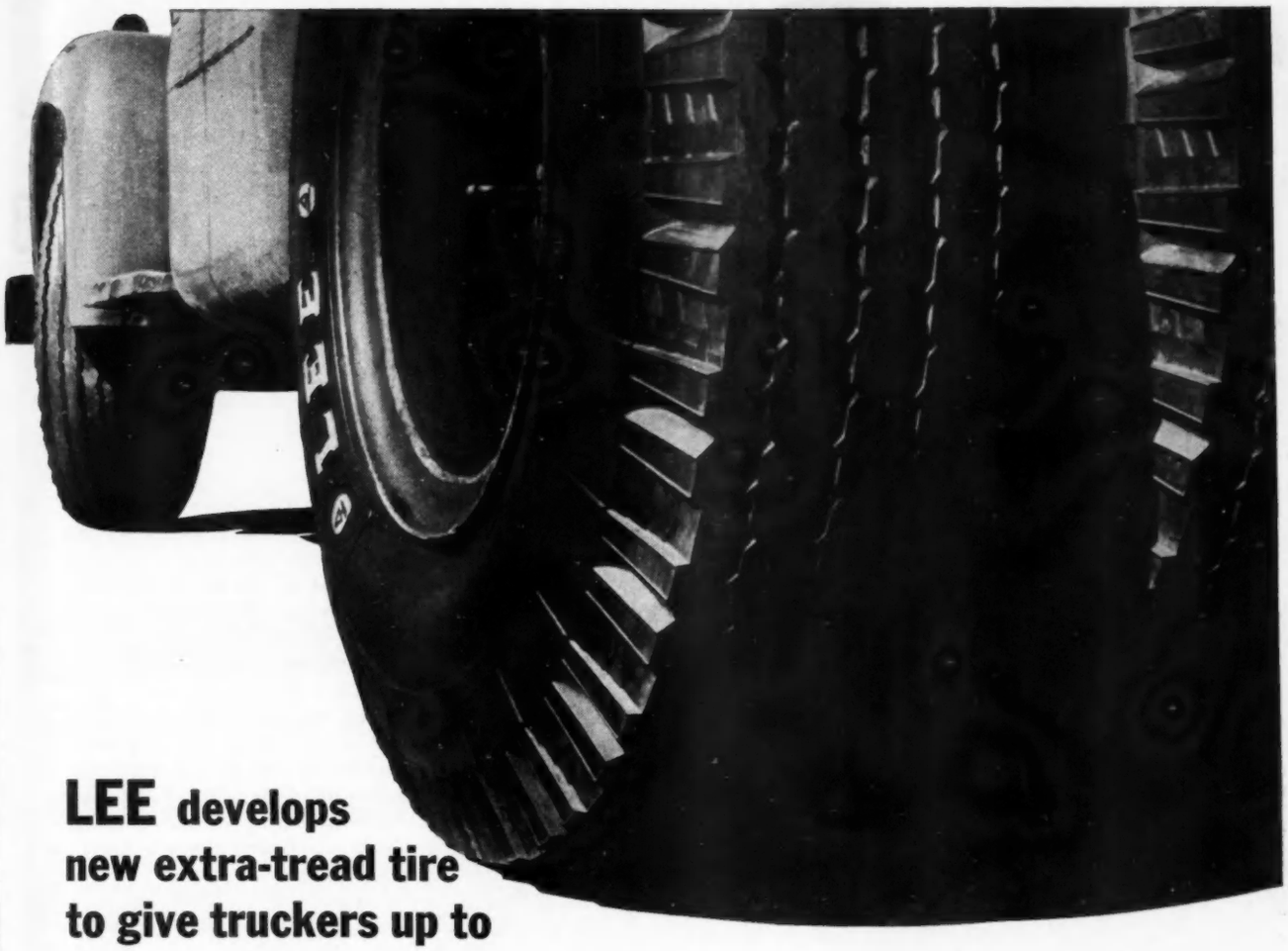


LEE develops new extra-tread tire to give truckers up to

50% More Original Miles

The LEE SUPER DE LUXE EXTRA TREAD 5-RIB

THIS NEW LEE TIRE . . . suitable for *any* wheel position on either truck or trailer . . . gives up to 50% more original mileage *by actual test*, yet costs only about 12½% more than a standard highway tire.

IMPROVED TREAD. Called the Maximile Tread, it is 44% deeper on the average, and has a much flatter contour. This puts more rubber in contact with the road—distributes the load more efficiently to increase tire life. Buttresses in the grooves give tread members extra support and develop a caterpillarlike action for throwing off small stones. Specially designed tread grooves prevent small cuts from growing into long tread cracks. Deep-cut shoulder design aids in controlling and throwing off heat developed in the shoulder area. Shoulder design is engineered to prevent radial cracks.

FLEXLOK IMPROVES THE CARCASS. Flexlok is an exclusive Lee development. This super-efficient cord-coating formula increases adhesion by 300%, makes cord separation from the rubber bond practically impossible—resists the effect of continuous flexing better than any previously developed adhesive, gives longer cord life. Flexlok reduces internal heat and is highly resistant to heat developed by normal flexing action of the tire. Tire growth is held to a minimum because of equalized tension on cords.

LUBRI-CUSHIONS LOWER COST-PER-MILE. Lubri-Cushions—special thin sheets of rubber between the plies—give longer carcass life by lubricating the plies and reducing internal friction, with its destructive heat. They protect against bruise breaks, because each Lubri-Cushion helps equalize flexing strain over the entire road impact area. They maintain carcass strength because they keep plies from separating. All this adds up to a stronger carcass that—combined with the better tread—increases original mileage and recap miles, too.

SEND COUPON FOR ADDITIONAL INFORMATION

LEE TIRES

LEE RUBBER & TIRE CORPORATION
Conshohocken, Pa. 2B

Please mail your new folder describing the many cost-cutting and performance advantages of the new Lee Super DeLuxe Extra Tread 5-Rib Truck Tire.

Company.....

My name.....

Street.....

City.....Zone.....State.....

HEAVY DUTY CLUTCH PLATE

- *standard-drilled extra-heavy facings wear better*
- *heat-treated multiple-riveted hub & disc last longer*
- *self-aligning splines install easier*

Write for Name GET IT FROM YOUR JOBBER *of Nearest Jobber*

Accurate **PARTS MFG. CO.**

12435 EUCLID AVENUE • CLEVELAND 6, OHIO

CCJ At Your Service

Continued from Page 12

perience and care to avoid damaging the bearing inserts, and it is made with all bearing caps loose except for the position under consideration. Here it is necessary to apply the correct torque to the clamping bolts. Be sure to follow the manufacturer's recommendations on shaft clearances and end clearance.

Connecting Rod Alignment—The center of the piston pin hole should be parallel to the centerline of the big end within 0.001 in. in 6 in. This means that both twist and bend are limited, and with this limitation the cause of a great many bearing failures will be eliminated.

Bearings Must Fit the Housing—If there is any doubt as to fit of the bearings in a rod or main saddle, spend an extra few minutes and be sure of the job. If it is suspected that the bearings are loose, apply a light coating of Prussian Blue to the housing, insert the bearing shells carefully, and torque the nuts. Then, break the assembly and remove the shells without smearing the transferred blue on the bearing backs. An 80-90 per cent transfer of blue to the bearing back will indicate that the bearings are adequately seated.

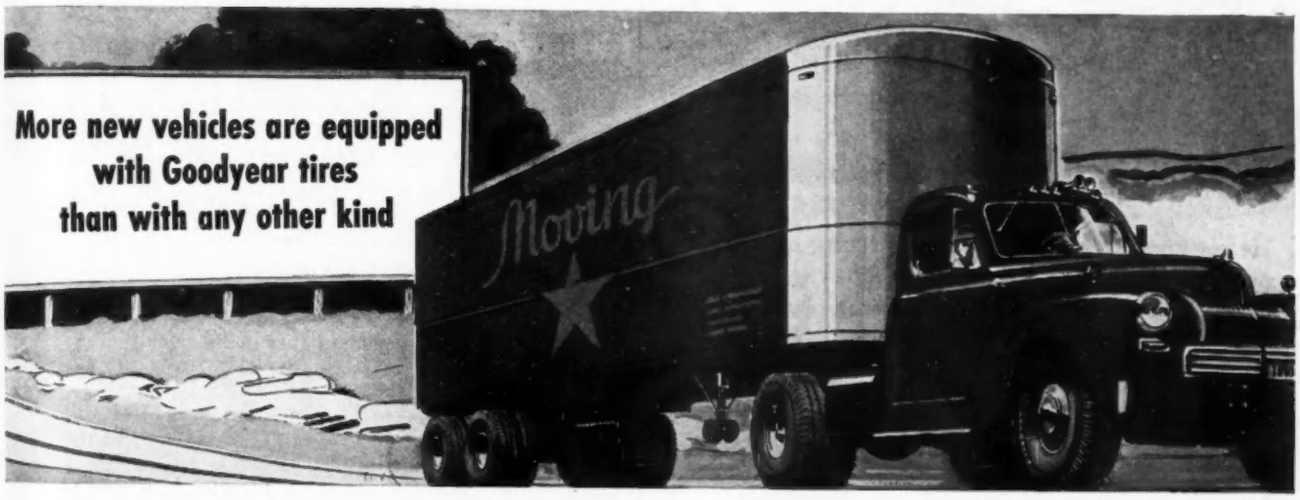
Shaft Must Rotate Freely—With the mains properly tightened, and without the rods and seals in place, the shaft must rotate freely. Any indication of binding must be traced and its cause removed! The best way to make this check is with the block mounted on a stand. Assemble the shaft with a light, uniform coating of blueing on the journals and after rotating the shaft a couple of revolutions, turn the block over and rotate the shaft again. The transfer of blue to the bearing shells will tell a big story about the life expectancy of the bearings. Blue in the parting line areas of the bearings is a prediction of trouble. Lack of contact on a bearing also means trouble. It could be excessive clearance, or it could be shaft and/or case bore misalignment. A decent blue pattern covering 45 to 90 deg at the center of all bearings will predict good bearing performance. This check is also a good place to pick up evidence of hour-glass journals, taper, shaft burrs, and fillet ride.

Instructional Film for Painters

SPRAY painters and others interested in spray painting will find a wealth of information in a black and white, sound 16 mm. film, "Making the Most of the Spray Painting Method," which has been produced by the DeVilbiss Co., Toledo, Ohio. The film, which is a 45 minute feature, illustrates the four basic principles of spray finishing: proper equipment, control factors important to achieve highest quality results, spray painting techniques, and the necessary care, cleaning and maintenance of equipment.

The film may be obtained for showings by writing directly to The DeVilbiss Company, 300 Phillips Avenue, Toledo 1, Ohio. Information about the DeVilbiss spray painting school is also available.

(TURN TO PAGE 18, PLEASE)



GOODYEAR, TRUCK TIRE DEPARTMENT, AKRON 16, OHIO

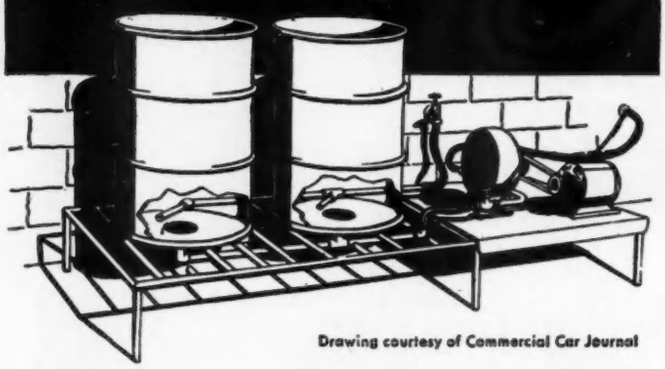
...And this overwhelming preference has been a fact for 39 years!

"They're better tires, that's why!"

GOODYEAR

THE GREATEST NAME IN RUBBER

Cut Cleaning Costs



Drawing courtesy of Commercial Car Journal

with this

Home Made Washer

Here's an easy way to beat your rising maintenance costs. With it you wash *more* trucks, buses *in less time* with *only half as much material.*

All you need is a couple of 55-gallon drums, two 18-inch stands, centrifugal water pump, ½-hp motor, pipe, connections—and a supply of Oakite Composition No. 70. You get a high pressure detergent spray that quickly, completely removes road dirt, grease, exhaust and oil films . . . rinses freely . . . leaves surfaces streak-free, uniformly clean and sparkling.

FREE . . .

detailed drawing . . . in-shop demonstration . . . on request.

Prefer hand washing? Then get this *free* folder, telling how to do the job with only one wash, one rinse—without chamoising. Write today!

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26D Rector Street, NEW YORK 6, N. Y.

SPECIALIZED INDUSTRIAL CLEANING

OAKITE

TRADE MARK REG. U.S. PAT. OFF.

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Technical Service Representatives in Principal Cities of U. S. & Canada

ccj At Your Service

Continued from Page 14

Transmission Diagnosis—Studebaker

Noisy in Neutral

TRANSMISSION noises in neutral, when the engine is idling, can be generally classified as a hiss or growl. Bearing difficulty is generally apparent as a hiss although in severe cases a bump or thud will be heard. Rough, worn, chipped, or scuffed gears are apparent as an intermittent growl or hum. An out-of-alignment condition between the transmission and the engine assembly may cause jumping out of high gear.

Causes

1. Bushings, bearings, or bearing rollers worn, rough, or dirty.
2. Gears worn, scuffed, chipped, or burred.
3. Worn or sprung countershaft.
4. Eccentric second or third speed gears.
5. Too much backlash in gear train.
6. Abnormal end play of gears.
7. Replacement of only one constant mesh gear instead of the complete set.
8. Incorrect grade or poor quality of lubricant

Noisy in Gear

Most transmission noises apparent in neutral will also be noticed in gear, although the frequency of the noise will increase. Transmission noises due to engine torsional periods occur at definite speeds and are not apparent during the entire speed range. Torsional transmission noises are usually heard as a high pitched, high frequency, metallic rattle.

Causes

1. Conditions causing noise in neutral—usually more pronounced at low speed.
2. Engine torsional periods being transmitted to transmission:
   (a) Clutch plate mechanical damper inoperative or incorrect friction lag due to transmission lubricant on clutch plate.
   (b) Clutch plate damper springs weak or broken.
3. Main shaft rear bearing rough, worn, or dirty.
4. Noisy speedometer gear.
5. Reverse idler gear or low gear worn, scuffed chipped, or burred.
6. Reverse idler gear shaft or bearing rollers rough, scored, or worn.

Rear Spring Shackles—Chevrolet

A NEW rear spring shackle and spring loaded spacer have been incorporated in the 1 ton panel, ¾ ton forward control and 1 ton forward control. This revised shackle and spacer will eliminate the "clucking" noise heard in panel type bodies which resulted from the spring striking the sides of the hanger or shackle when operating over rough roads.

"DIRTY ENGINES ARE COSTLY ENGINES"

F. J. Hoagland,
Owner,
Elgin Yellow Cab Co.

"My engines were just too dirty when we took them down. And dirty engines are a sure sign you're not getting efficient use out of cabs." So Mr. Hoagland decided to try Phillips *66* Heavy Duty Motor Oil.

Here's what Phillips *66* Heavy Duty Motor Oil is doing for Elgin Yellow Cab Company. First and foremost, as Mr. Hoagland says, "We noticed that our engines were cleaner than before. We didn't get as much low temperature sludge. This alone added up to smoother cab performance and longer engine life." Overhaul has been stretched out to between 85,000 and 125,000 miles. Now valves are seldom worked over except at overhaul time.

Mr. Hoagland sums it up with, "Phillips *66* Heavy Duty Motor Oil is the best oil I've used. I'm satisfied it helps cut down our maintenance costs and gives us more efficient use of our cabs."

And what this great oil is doing for Elgin Yellow Cab Company, it can do for you. No matter what kind of fleet you operate, investigate—find out how you can take advantage of Phillips *66* Heavy Duty Motor Oil.

Taxicabs traveling some 7,000 miles a month need the protection of top quality Phillips 66 Heavy Duty Motor Oil.

Set up your own test. We will be glad to help you plan it without obligation. Write to: Sales Department, Phillips Petroleum Company, Bartlesville, Oklahoma.

Oil for the Engines of Commerce

Phillips 66

PHILLIPS 66 HEAVY DUTY MOTOR OIL

How Baltimore Keeps 600 Buses on "CLEAN" Schedule with MALSBARY

MALSBARY 300 blasts encrusted grease from big Diesel in 30 minutes; saves time by "basket" cleaning small parts.

Baltimore Transit steam cleans each of its 600 buses every 3000 miles; also all engines before overhauls and re-ring jobs. Maintaining this cleaning schedule is important, pays off in extra mileage, quicker overhauls, less downtime. That's why Baltimore five years ago switched to a MALSBARY Model 300 heavy-duty cleaner, now owns four—three clean continuously 8 hours daily, the fourth operates 3 shifts each working day!

MALSBARY Does More, Quicker

But dependability isn't the whole story. MALSBARY exclusive patented pumping system enables you to steam clean at 150-250 lbs. pressure, yet keep heat at 325°F. (an impossibility with other cleaners). Cold water at 400 p.s.i., blasts away corrosive dirt, grease and caked mud in ¼ time required by steam vapor cleaners. You also can quickly degas, heat and clean tankers, strip surfaces for painting, handle many tough jobs others can't touch.

See for yourself—fill in coupon NOW for demonstration on your job.

MALSBARY MANUFACTURING CO. SINCE 1921

Room K-2,
845-92nd Ave.,
Oakland 3, Calif.

Malsbary Mfg. Co., Room K-2,
845-92nd Ave., Oakland 3, Calif.

I am interested in—

- ☐ Free booklets on MALSBARY cleaners.
- ☐ On-the-job demonstration.
- ☐ Names of nearby MALSBARY users.

MAIL TODAY!

44

NAME _____ POSITION _____

BUSINESS _____

ADDRESS _____

DATES and DOINGS

(For calendar of Fleet Training Courses, see page 106)

FEBRUARY

11—Empire State Highway Transportation Assn., Annual Dinner, Statler Hotel, New York, N. Y.
11-13—New Mexico Motor Carriers Assn., Annual Meeting, Hotel Nickson, Roswell, N. M.
11-13—Oregon Motor Transport Assn., Annual Meeting, Multnomah Hotel, Portland, Ore.
17-19—National Transport Vehicle Show and Fleet Maintenance Exposition, New York, N. Y.
17-19—White House Conference on Highway Safety, Washington, D. C.
18-20—Louisiana Motor Transport Assn., Annual Meeting, The Jung Hotel, New Orleans, La.

MARCH

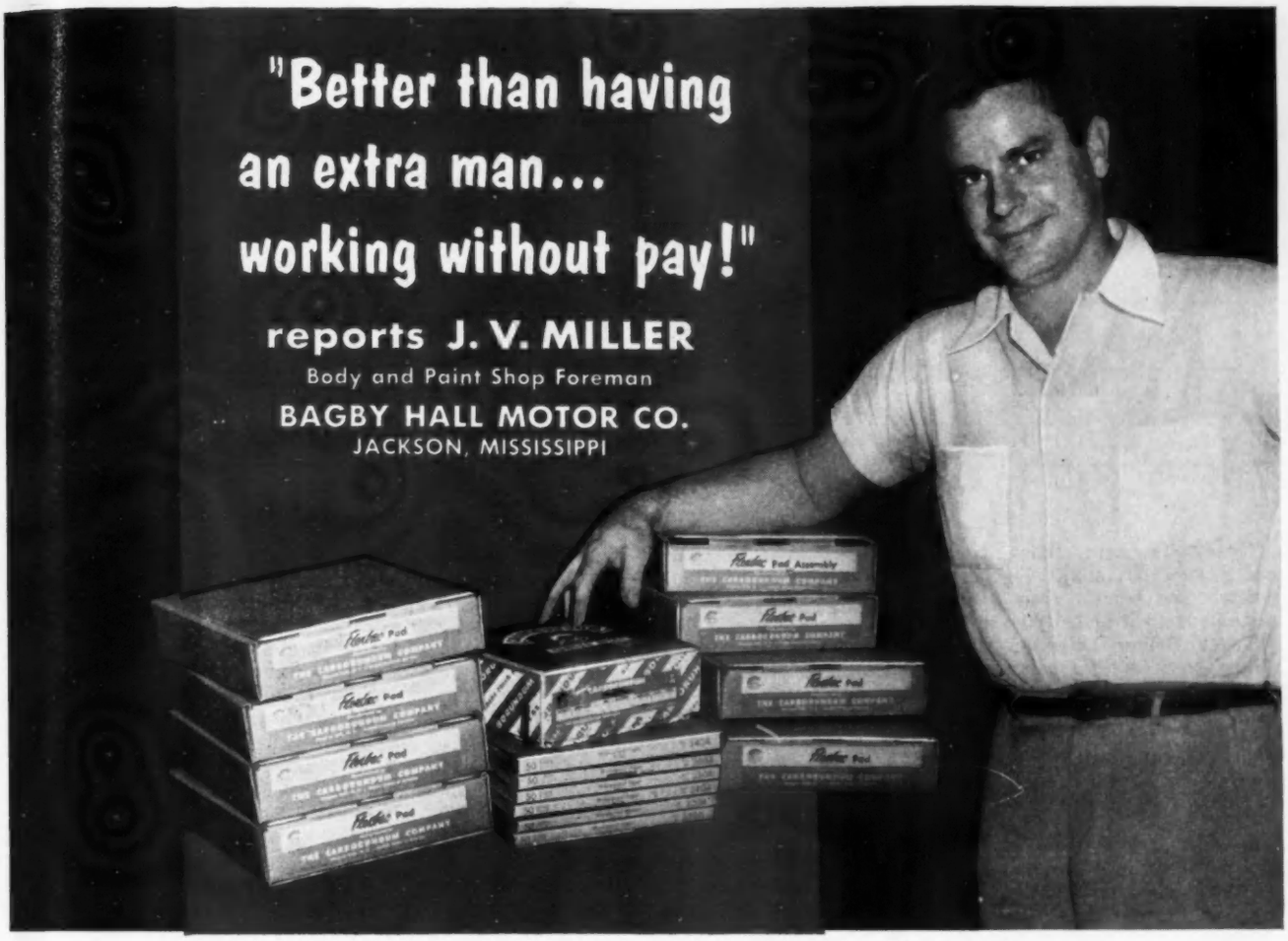
2-4—Society of Automotive Engineers, Passenger Car, Body and Materials Meeting, Hotel Statler, Detroit, Mich.
4-5—Ohio Trucking Assn., Annual Convention, Neil House Hotel, Columbus, Ohio
4-7—Pacific Automotive Show, Seattle Civic Auditorium, Seattle, Wash.
23-25—American Transit Assn., Region III Conference, Hotel Statler, Detroit, Mich.
26-27—Wyoming Trucking Assn., Annual Convention, Irma Hotel, Cody, Wyo.
27—Arizona Motor Transport Assn., Annual Convention, Hotel Westward Ho, Phoenix, Ariz.

APRIL

1-3—Irregular Route Common Carrier Conference, American Trucking Assns., Annual Convention, Majestic Hotel, Hot Springs, Ark.
2-4—Heavy and Specialized Carriers Section, Local Cartage National Conference, General Meeting, Hotel Muehlback, Kansas City, Kan.
5-7—American Society of Lubrication Engineers, Annual Meeting, Netherlands-Plaza Hotel, Cincinnati, Ohio.
5-9—Greater New York Safety Council, Commercial Vehicle Section, Annual Safety Convention and Exposition, Hotel Statler, New York, N. Y.
8-11—Midwest Automotive Trade Show, Kiel Auditorium, St. Louis, Mo.
20-23—American Gas. Assn. and Edison Electric Institute Motor Vehicle Committees, Spring Conference, Mt. Royal Hotel, Montreal, Canada.
22—Maine Truck Owners Assn., Annual Meeting, Hotel Lafayette, Portland, Me.
27-30—American Transit Assn., Region I and II Conference, Hotel New Yorker, New York, N. Y.
27-30—Tri-State Regional Automotive Show, Pittsburgh, Pa.
29-30—Alabama Trucking Assn., Annual Meeting, Hotel Admiral Semmes, Mobile.

MAY

4-6—National Highway Users Conference, Highway Transportation Congress, Mayflower Hotel, Washington, D. C.
4-7—American Welding Society, Spring Technical Meeting, Hotel Statler, Buffalo, N. Y.
16-18—Maryland Motor Truck Assn., Annual Convention, Lord Baltimore Hotel, Baltimore, Md.
18-20—American Transit Assn., Region V Conference, Hotel Leamington, Minneapolis, Minn.
20-23—New England Regional Automotive Show, Mechanics Bldg., Boston, Mass.
24-26—American Transit Assn., Region VII Conference, Washington Hotel, Seattle, Wash.
24-26—Automotive Engine Rebuilders Assn., Annual Convention, Statler Hotel, Buffalo, N. Y.
24-27—American Trucking Assn., Terminal Operations Council, Annual Meeting, St. Louis, Mo. (Meeting will be separate from other ATA Councils.)


"Better than having an extra man... working without pay!"
reports J. V. MILLER
Body and Paint Shop Foreman
BAGBY HALL MOTOR CO.
JACKSON, MISSISSIPPI

"We save time and money using CARBORUNDUM'S FLEXBAC® Pad and RED-I-CUT® Waterproof Papers," declares Mr. Miller. "They cut the sanding operation, which is the longest step in refinishing with enamel, by 20% or better. We've eliminated 50% to 60% of the hand sanding time over old enamel finishes. We're turning out higher quality work and making more profit for the shop at the same time."

Mr. Miller's comments are echoed by hundreds of body shop owners and managers who have found the FLEXBAC Method a real time and money saver. Many shops have doubled their daily output—and more, without using additional men.

Whether you're doing a complete sanding job or feather-edging small spots, you'll find the FLEXBAC Pad Assembly and RED-I-CUT Waterproof Paper is an unbeatable combination.

USE THEM FOR A MONTH in your shop, and you'll know from experience why the FLEXBAC Method has so many enthusiastic boosters. Your CARBORUNDUM or Jobber Salesman is the man to call. Or write to The Carborundum Company, Dept. CC 90-44, Niagara Falls, New York.

Flexbac® Method

RED-I-CUT® Waterproof Paper Discs—*long-lived, fast-cutting, non-peeling.*

FLEXBAC Pad Assembly—*ideal for contours as well as flats*

FLEXBAC Masking Tape—*easy-on, holds tight, easy-off.*

the superior autobody products by

CARBORUNDUM

REGISTERED TRADE MARK

90-44

Laugh it off!

Gypsy Trucker: "Hey, you guys, get a load of this. I just bought a second-hand tractor from a friend of mine in Detroit and it cost me $9500."

Truck Driver Friends: "You can't kid us, boy. As tight as you are, you'd never pay $9500 for a second-hand tractor."

Gypsy Trucker: "Not ordinarily. But he sent it airmail collect."

CCJ

First Diner Waitress: "That freight truck driver friend of mine says he can always tell when it's going to rain."

Second Diner Waitress: "How?"

First Diner Waitress: "His foot hurts."

Second Diner Waitress: "Shucks, a lot of people can do that."

First Diner Waitress: "He can also tell when it's going to snow."

Second Diner Waitress: "How?"

First Diner Waitress: "His foot hurts."

Second Diner Waitress: "Darn it then, how do you know the difference between rain and snow?"

First Diner Waitress: "That's easy, gal. You can shovel snow!"

CCJ

THE FIRST TIME I KISSED MINNIE,
I'LL NEVER FORGET.
SHE FORGOT TO REMOVE
HER LIVE CIGARETTE.

CCJ

Fork Truck Operator: "Mac, you've lost ten pounds in the last week worrying about that red-haired dame. Things will work out. Remember, when a woman says 'No', she means 'Maybe'. And, if she says 'Maybe' she means 'Yes'."

Freight Loader: "What does she mean when she just says 'Fooey'?"

CCJ

Old Diner Waitress: "Dearie, I've been around a long time. For your own sake I'd like to give you some good advice. Remember this, if you smoke, drink and neck, men will call you 'fast.'"

New Diner Waitress: "Yeah, I know. Just as fast as they can get to the telephone."

Steno Sue: "Remember what you told me about the shortest way to a man's heart?"

Steno Lou: "Yeah, honey, you just can't beat culinary skill."

Steno Sue: "That's what you think, kiddo. Last night I found a new route."

CCJ

Freight Truck Driver: "See here, bud, I may be a truck driver but I come from one of the finest families in Virginia. You can't arrest me."

Traffic Cop: "Let's don't flip our lid, Mac. I ain't arresting you for breeding purposes."

CCJ

SLIM 'N GREASY, OUR MAINTENANCE SECTION'S GIFT TO THE LADIES, SAYS: "SOME GIRLS ARE LIKE PIANOS. IF THEY WEREN'T UPRIGHT THEY'D BE GRAND!"

CCJ

The Freight Claim Agent's wife ran through a red light, and the traffic cop yelled, "Lady, don't you know when to stop?"

Looking back at the mob of children in the back seat of her car, the Claim Agent's wife replied, "I'll have you know that these kids are not all mine, you fresh thing, you!"

—"Cici Jay"—

"Now I know where that muffled whistle came from that we heard a second ago!"

The traveling auditor for a southern freight line ran out of gas one evening on a lonely stretch of detour road and asked at the only farmhouse in sight, "Can you put me up for the night?"

Said the farmer: "If'n you don't mind sharing a room with my young son."

"Good heavens," gasped the traveling auditor, "I'm in the wrong joke!"

CCJ

The Freight Handler for Fleety-Fleet Express was overpaid $25 on his paycheck. He said not a word about it. A week later the accounting department deducted the overpayment.

Freight Handler: "What's the big idea? My paycheck is short $25!"

Warehouse Foreman: "You were overpaid $25 last week. And you didn't say a word about it, incidentally."

Freight Handler: "O.K. I know that! I can overlook one mistake, but when it happens twice, then it's time to say something!"

CCJ

MAYBE SHE WILL AND
MAYBE SHE WON'T,
BUT AT LEAST YOU CANASTA!

CCJ

The truck dispatcher filled in his insurance application and handed it to the insurance salesman who, after studying it a moment, said, "Mr. Jones, you'll have to change this part where it asks the relationship of Mrs. Jones to yourself. You should write 'wife', not 'strained'."

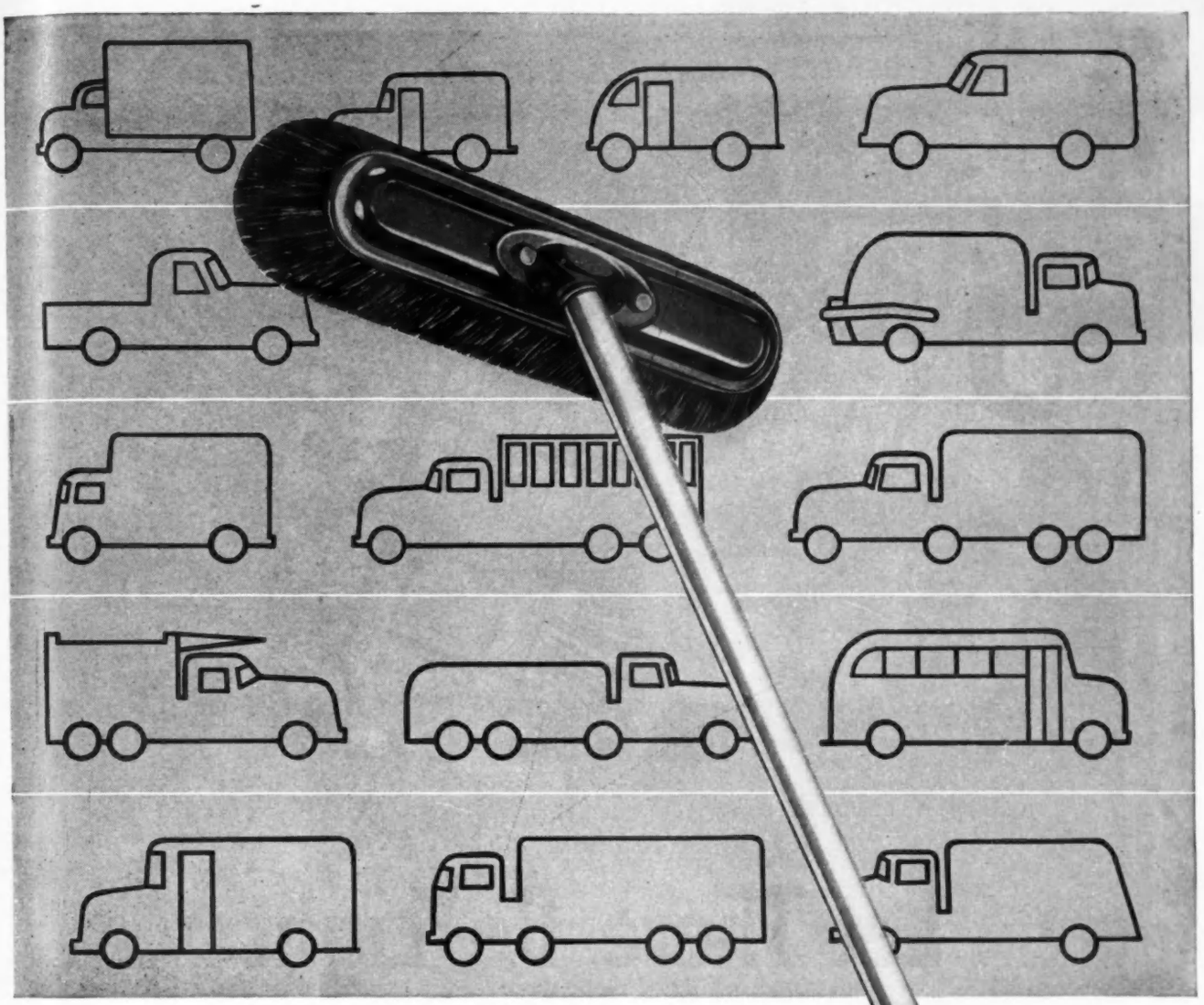
CCJ

First Truck Mechanic "Geez, wuz that some babe I took out last nite. We walked to the car, and after I got in, she just stood there. I said, 'What are you waitin' for? Get in.'"

Second Ditto: "What'd she do?"

First Truck Mechanic: "She said, 'Don't you even open the door for a lady?' I said, 'Oh, is they somebody comin' with us?'"

Resume Work



WASH MORE TRUCKS PER HOUR, MORE TRUCKS PER BRUSH

Every part of the Speed Wash is designed for easy handling, top performance and long service. Speed Wash bristles are soft and resilient (50% Nylon, 50% Select Horsehair) to prevent tangling and matting. The tufts are fastened with rust-proof wire; they cannot come out or come loose. The block is water-proof mahogany plywood. The steel back is water-tight and surrounded with a mar-proof rubber bumper. The steel handle is light-weight and zinc-plated inside and out.

These and other features put Speed Wash in a class by itself, the quality fountain brush of the trucking industry. Thousands of fleets prefer Speed Wash. We know you will, too. In fact, we guarantee it.

ORDER ON THIS GUARANTEE

SPEED WASH brushes are guaranteed to be exactly as represented. Your money will be refunded in full including shipping costs, if they do not give complete satisfaction and are returned within 10 days.

No. 250 ROUND

EITHER STYLE
Complete with 5' handle $12.45

SPEED WASH

MILWAUKEE DUSTLESS BRUSH CO. (MD) **530 N. 22nd ST., MILWAUKEE 3, WIS.**

CCJ BULLETIN BOARD

DRIVERS • MECHANICS • SAFETY MEN *Please Note!*

Let There Be Light

Good maintenance requires good lighting—but too many times a mechanic's portable lamp does little but hang in his way. Is your trouble lamp giving trouble instead of illumination? Candlepower isn't much good to you on the ceiling, and auxiliary lighting tucked away in the tool bin only clutters the place.

A mechanic with poor light on his work is about as handicapped as a near-sighted man at a dog fight. He's bound to miss a play. Why impede your hand work when you can improve it with foot candles?

In the interest of *safety* you need good light. Anything from skinned knuckles to electrocution can often be blamed on the dim-light dim-wit.

In the interest of *precision work* you need good light. A work bench is no place to "feel" in the dark. You'll miss something that a road trip will find.

In the interest of *better morale* you need good light. If you get lost in the gloom, you'll find yourself not giving a damn about the finished job.

So select a portable light with at least 30 candlepower—maybe 100 cp for the workbench area itself. Then locate it where it will do some good. Keep reflectors clean and shiny. Provide for quick methods of hooking or mounting. And keep your work areas clean. A black floor or bench or engine will rob you of good see, you see.

Get the light habit. It will lighten your work, and it will save time and headaches for the guy who has to live with your finished jobs.

CLIP AND POST ON YOUR OWN BULLETIN BOARD — REPRINTS AVAILABLE AT NOMINAL COST

CLIP AND POST ON YOUR OWN BULLETIN BOARD —— REPRINTS AVAILABLE AT NOMINAL COST

Look what AUTOCAR offers for '54!

★ 31 MODELS

★ 8 ENGINES
Gasoline and Diesel

★ 19 TRANSMISSIONS

★ 7 AUXILIARY TRANSMISSIONS

★ 14 REAR AXLES

★ 2 NEW LIGHTWEIGHT WEST COAST MODELS

★ NEW ALL-ALUMINUM DRIVER CAB

Fill out the coupon below and learn more about Autocar tractors, trucks, dump trucks, and tandem units.

Autocar Division of The White Motor Company, Ardmore, Pa.
I would like to hear more about Autocar for '54.

Name .....

Company Name .....

Address .....

Type of Operation ..... **No. of trucks in fleet** .....

3B

AUTOCAR TRUCKS

Autocar Division of The White Motor Co.
Ardmore, Pa.

Export: Drexel Building,
Philadelphia 6, Pa., U.S.A.

●

Factory Branches and Distributors from Coast to Coast in the United States and Canada

CCJ NEWS REPORTS

WASHINGTON RUNAROUND

by KARL RANNELLS Washington Correspondent

Taxes . . . a Fight Ahead

Administration tax plans offer no comfort to the trucking industry—if Congress should fall in line and vote to go along. First, the White House urges corporate income tax rates be kept at the current 52 per cent rate. Equally important, the administration wants excise taxes kept at present levels, specifically asking that no reduction be made in excise rates now in effect on motor vehicles and parts, or in the federal 2-cent gasoline tax. A bitter fight is in the offing, will develop shortly.

Labor Law . . . Revisions Asked

White House has made its decision, doesn't believe any major changes are needed in the Taft-Hartley Act now. But it does recommend 14 minor revisions, including requirement that employers, as well as union officials, sign non-Communist affidavits. A clearer definition of secondary boycott is urged, permitting boycott of work farmed out by a struck plant but not work indirectly concerned. Whether loading-unloading freight at a struck plant is an "innocent" operation will have to be spelled out.

Tax Amortization . . . to Continue

For the present, at least fleet operators will continue to be considered for tax amortization certificates covering portions of the costs of construction of terminals and other facilities, including maintenance shops. Each application will be considered on an individual basis, however. A higher percentage of coverage can be expected if such new facilities are planned so as to conform with dispersal standards—away from other bomb targets.

Piggy Back . . . Rules Coming

Increased interest in movement of highway trailers on flat cars has been taken account of by ICC to the extent it has begun a study which likely will end in rules governing such operations. Feb. 15 has been set as the tentative deadline for interested parties to file briefs.

Fair Labor Act . . . Applies to T-Mail

Standards of figuring costs of a T-mail contract may need a second look. Labor Department has warned that minimum wage and overtime provisions of the Fair Labor Standards Act apply to T-mail hauls just as to other government contracts, regardless of any employer-employee agreement. This means that regulations provided by the Act apply not only to drivers and helpers but also to loaders, mechanics, and any workers who take part in any way in mail hauling operations—even to the girl clerk in the office who files the records.

With, Maybe . . . Boost in Minimum Wage

Administration is asking what will amount to broad revision of Fair Labor Standards Act. Because no big changes are planned for Taft-Hartley, administration may get its proposed Fair Labor changes through Congress. This would mean an increase in the present minimum of 75-cents-an-hour and coverage of more and smaller businesses. Such legislation will be important to fleet owners since T-mail contractors are automatically brought under coverage.

'54 Freight Volume . . . Above '53

On basis of reports to the government, 1954 freight volume will exceed that of 1953. Railroads expect about same levels; highway fleets foresee a moderate increase; and airlines expect a 10 per cent rise or better. Railroads will spend $1 billion for equipment; trucking fleets, about $7.5 billion, including parts; and airways have orders on the books for 300 new transport type craft.

Rails Get . . . Mail Rate Boost

It now looks as if railroads may get an increase of 10 per cent for hauling fourth class mail. Last month, the rails scaled down an earlier request for a 45 per cent boost after a second look at the inroads being made by trucks in the mail haul field. Approval of the rate rise by the ICC is now expected in view of Post Office agreement that a 10 per cent increase is probably justified.

Military Trucks . . . Buying Cut

White House budget proposals call for a reduction of $5 billion below last year's appropriations for the next fiscal year beginning July 1. A small part of this savings is to result from reduced procurement of military trucks by the Defense Department. Buying rate is likely to be cut by one-half.

Which Is Better for On-the-Road Hauling?

Dual Drive? Trailing Axle?

Brockway Model 154W with Trucktor Model HR Trailing Axle, 10:00 x 20 tires, mechanical air brakes.

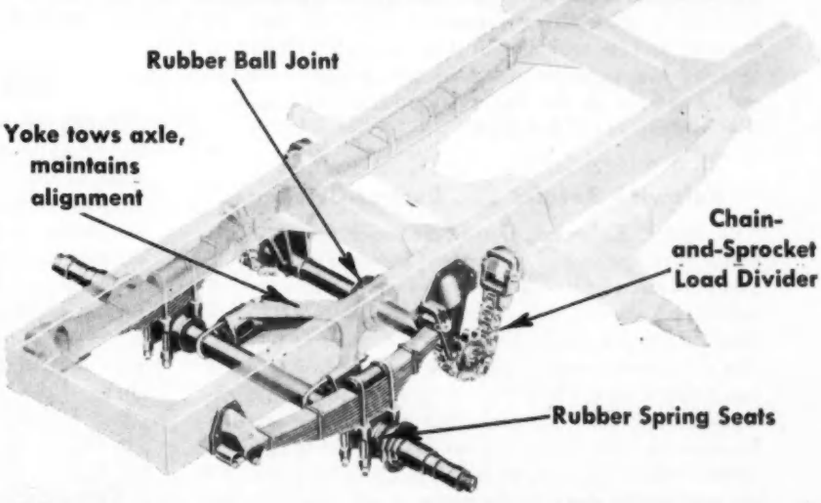
FOR MORE PAYLOAD specify *Trucktor* Trailing Axles. They add less weight than second driving axles.

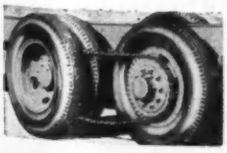
FOR LESS DOWN-TIME specify *Trucktor* Trailing Axles. They require fewer overhauls . . . get back into service *faster.*

FOR LOWER MAINTENANCE COSTS specify *Trucktor* Trailing Axles. They have fewer parts to wear, inspect, replace . . . overhauls require fewer man-hours.

PLUS better tire and gas mileage!

. . . Trucktor TRAILING AXLES





Exclusive! *Detachable* Chain-and-Sprocket 4-WHEEL DRIVE

Makes tire chains unnecessary. When extra traction is needed, sprocket chains are slipped over sprockets and pinned. Attached and detached quickly, simply, without removing wheels (in picture, wheel removed to show construction).

Yoke plus Rubber Ball Joint tows the unit . . . keeps wheels aligned and on the ground . . . absorbs all brake reaction.

6-Point Frame Support protects frame . . . reduces side sway . . . supports frame *behind* last axle.

Springs plus Rubber Spring Seats provide easy ride. Springs carry load only . . . take no brake reaction.

Chain-and-Sprocket Load Divider provides greater flexibility going over bumps, holes.

***Trucktor* also manufactures Single and Tandem Trailer Axle Assemblies, available with standard steel springs or the new General Air Spring. Inquire!**

For details call your Truck Dealer, Trucktor Distributor, or write direct.

THE TRUCKTOR CORPORATION, Route 22, Mountainside, N. J.

CCJ NEWS REPORTS

DETROIT DISPATCH

by LEN WESTRATE Detroit News Editor

Gas Turbine Engine . . . for Buses?

General Motors sees little possibility of the gas turbine in passenger cars in the foreseeable future but has an entirely different viewpoint on its chance for commercial application. It now is installing a gas turbine in an experimental bus which will be tested by a large operator. Some General Motors engineers think its best possibilities may be in large off-the-road equipment where fuel consumption is not the prime consideration and where constant torque of the turbine can be utilized better. That may have been a factor in the purchase of Euclid. General Motors' gas turbine car is strictly for experimental purposes and there is little indications that GM is serious about production.

New Trucking PR Film . . . Coming

Truck manufacturers, through their AMA Committee, soon will announce a new public relations trucking film with a different approach. Primary objective is subtle selling of the trucking industry with a good story plot which will indirectly acquaint the public with the industry and its problems. It does not rely on statistics to get the message across. Also, it is designed for the public and not for the leaders of the trucking industry, who already know the score.

Kolowich Retains . . . Denver-Chicago

George J. Kolowich, Detroit financier, has won his battle to retain control of Denver-Chicago Trucking Co. The ICC has reversed a previous adverse ruling which held that Kolowich, associates, and the Detroit & Cleveland Navigation Co. had violated ICC rules in not getting prior permission to purchase because D & C was a competing carrier. However, it found that the navigation company has abandoned the water transportation business and that there was no conflict with public interest. Denver-Chicago, in which Kolowich controls 60 per cent of the stock, is the nation's only trucking line with a coast-to-coast permit.

New Gasoline and Diesel . . . V-8 Engines

Continental Motors soon will announce a line of V-8 gasoline and diesel engines for trucks. The V-8 will develop about 240 hp in the gasoline type. There will be a companion engine in the high speed diesel range. Continental also has just announced a six-cylinder inline, 802 cu. in. 4-cycle diesel engine developing 217.5 hp at 2200 rpm.

Mail . . . By Piggy Back

The Post Office Department is jumping into rail-trailer hauling on an experimental basis. It quietly is trying out the idea between New York and Boston. It still is problematical, however, whether the rail terminal facilities are adequate to handle large scale operation of mail deliveries.

Eaton Buys . . . Magnetic Patents

Eaton Manufacturing Co. has acquired foreign rights to the Jacob Rabinow patents applying to certain aspects of using powdered iron as a magnetic power transmission medium. Eaton for several years has held patent rights on a principle of electro-magnetic clutching, braking, and power transmission using a magnetizeable powdered metal and dry lubricant mixture.

Basic principle of operation is to magnetize the fine metal particles in dry additives to provide a power transmitting medium varying in efficiency in direct proportion to the amount of current applied.

Rails . . . Seek Rate Reductions

Truck operators report concern over increasing activity by railroads seeking rate reductions to get back some of the business lost to truck lines. Rate cuts on a long list of items are being proposed or are under consideration, including iron and steel, certain chemicals, aluminum, dairy products, canned foods, petroleum products, and several others. Some of the reductions in certain areas run as much as 27 per cent. Truckers, however, still have a definite cost advantage on short runs and undoubtedly will continue to hold a good share of the long-haul business in most lines.

Nash-Hudson . . . Merge

Consolidation of Nash and Hudson is an extension of the trend that has been developing in the truck field in the postwar period. It is a mark of the increasing competition pitting the economic strength of the large companies against the lower volume, higher cost of smaller operators. Nash and Hudson will be separate divisions of American Motors Corporation, a new company. There is no present indication that the company has plans to enter the truck field. Hudson, up to a few years ago, produced half-ton pickup trucks, and Nash, after the war, had tentative plans to get into the truck business. Both have since retired from the field.

Which is hotter?

Inside an engine?

Inside molten lava?

Answer: When combustion occurs, the temperatures within the cylinders of an automobile engine frequently go as high as 4800°F . . . *more than three times as hot as flowing volcanic lava!*

The advantages of chrome plated piston rings in this area of intense heat, highest pressure and poorest lubrication have been recognized by automotive engineers everywhere . . . and 25 out of 27 LEADING ENGINE MANUFACTURERS USING CHROME RINGS SPECIFY PERFECT CIRCLE.

For complete chrome protection . . . for thousands of extra miles of sustained power and lasting oil economy, always install

Perfect Circle

2 in 1 Chrome Piston Rings

The Standard of Comparison

The application of solid chrome plating to piston rings, as perfected by Perfect Circle, more than doubles the life of pistons, cylinders and rings. Complete performance data will be sent upon request. The Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Company, Ltd., Toronto, Ontario.

CCJ NEWS REPORTS

FEBRUARY ROUNDUP

by ERNIE FOREST Assistant Editor

Trucks Pay . . . 4 to 1

In Washington last month, members of the Economics, Finance and Administration Dept. of the Highway Research Board heard a few facts of highway finance, learned that trucks, as compared to passenger cars, were paying, on a vehicle mile basis, a 4 to 1 share of the nation's highway bill.

In a presentation by E. M. Cope, J. T. Lynch and C. A. Steele of the Bureau of Public Roads, the highway officials were told these facts:

All trucks and combinations made up slightly less than 17 per cent of vehicle registrations, contributed more than 33 per cent of user revenues.

Of these, medium and heavy trucks and combinations were 6.3 per cent of all registrations, paid 24.5 per cent of road use taxes.

Of these, tractor-semi and truck-trailer combinations made up 0.92 per cent of total registrations, accounted for 11.8 per cent of road user tax dollars.

Ton Mile Taxes . . . Being Introduced

Latest states to be faced with a ton-mile tax fight are Colorado and Kentucky. In Colorado, the Speaker of the House has announced plans for quick consideration of a $3.6 million truck ton-mile tax, despite opposition from the Colorado Motor Carriers Assn. The association suggests a higher truck gasoline tax as a compromise.

In Kentucky, the push comes from the state's Railroad Assn. A complete proposal for a truck ton-mile tax on trucks of 18,000 lb or more GVW calculated to produce $15 million a year has been sent by the association to all members of the state's General Assembly. The Kentucky Motor Transport Assn. is going ahead with its plans to increase the state's truck weight limits. Highest weight allowed at present is 42,000 lb GVW, the nation's lowest.

Report from . . . National Meetings

At Truck-Trailer Manufacturers Association's annual meeting held last month, John C. Bennett, Utility Trailer Mfg. Co. president, was elected TTMA president. Other officers elected include: C. L. Schneider, Fruehauf Trailer Co. vice president in charge of sales—eastern vice president; R. R. King, American Body and Trailer Co. president—western vice president; Fred T. Roberts, The Budd Co., Wheel Division—vice president for associate members; and C. Bradford Sheppard, Strick Co. president—treasurer. For a full report on the meeting, see page 108 this issue.

Record attendance and high interest were among the highlights of the Society of Automotive Engineers annual meeting held in Detroit last month. A full report of the meeting begins on page 72 of this issue.

Federal Aid . . . Apportionment Made

The Dept. of Commerce has announced apportionment of the $575 million authorized as federal aid to highways for the period July 1, 1954 to June 30, 1957. The federal-aid primary highway system will get $247.5 million, secondary or feeder roads $165 million, urban highways $137.5 million, and the interstate system $25 million. Meanwhile, Congress is considering a bill (H. 7124) to increase the authorized amount to $862 million.

Reciprocity—A Hot Topic

Reciprocity is still a hot topic in the trucking industry as this issue goes to press. A special meeting of the Governors' Conference on the issue was held Jan. 23, and it was freely rumored that ATA's Committee of One Hundred reviewed the situation at its Jan. 30 meeting in New Orleans, La. A host of other events pointed up the developing serious crisis in reciprocity reviewed on this page in last month's issue.

As . . . Truckers Sue

By far the biggest news was the fact that a group of 31 central states interstate motor carriers had begun suit in the U. S. District Court, Columbus, Ohio, against Ohio's axle-mile tax. They said it laid an undue burden on interstate commerce, was discriminatory as between classes of highway users and bore no relation to cost of highways.

The court is scheduled to convene Feb. 11 to decide if a valid basis exists for the suit. The truckers cited the breakdown of reciprocity, prohibitive operating costs and the effect on consumer prices and the national economy as reasons for prompt consideration of the matter.

Maybe . . . Federal Investigation, Laws

Congressmen Ayres and Zablocki have introduced resolutions (H.R. 407 and 409) authorizing the House Interstate and Foreign Commerce Committee to investigate barriers to interstate commerce on the highways when certain discriminatory and unilateral actions are taken by individual states. Representative Ayres (Ohio) said he does not intend to stand idly by and see jobs of Akron district truckmen affected.

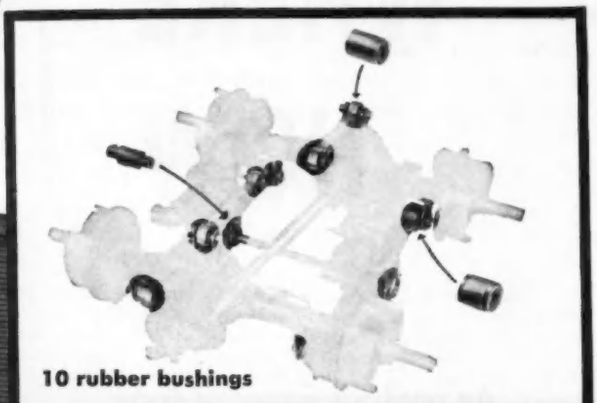
(TURN TO PAGE 174, PLEASE)

INTERNATIONAL LEADS AGAIN...

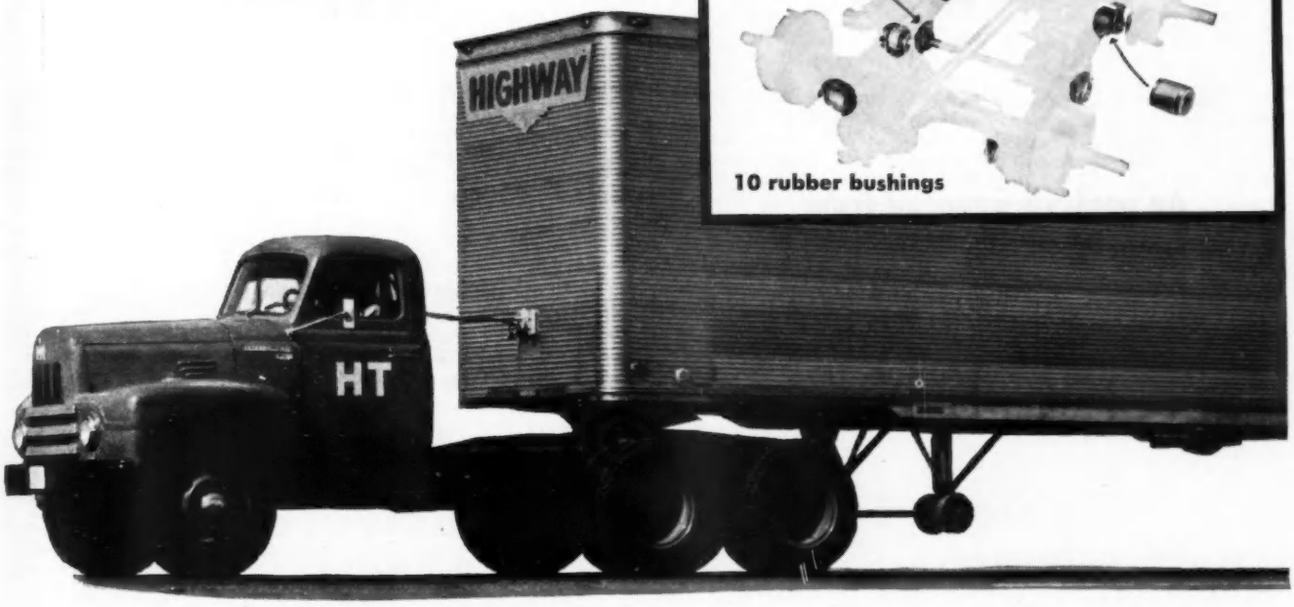
NEWEST, FINEST BOGIE

IN THE 6-WHEEL FIELD

The new INTERNATIONAL bogie provides a new exclusive torque arm design straddle mounted at axle and frame, for greatly increased strength, and new rubber bushings on torque arms, equalizing beams and radius rods for reduced road shock, and elimination of 10 lubrication points. A new self-contained brake and cylinder unit cuts servicing costs, offers greatly increased protection from damage in off-highway operation.



10 rubber bushings



Once again, INTERNATIONAL makes the big news in 6-wheel bogie design. Once again, the pioneer of 6-wheel development and 6-wheel sales leader for 19 straight years tops 'em all in features for efficiency, economy, and long life.

In today's INTERNATIONAL 6-wheelers you get everything that's new and everything that's best, plus such extra-value features as the famous, proved INTERNATIONAL power divider and third differential.

Ask your INTERNATIONAL Dealer or Branch for full facts . . . and a demonstration. You'll quickly see why —for off-the-road or over-the-highway—an INTERNATIONAL Truck with new INTERNATIONAL bogie is the world's best 6-wheel buy.

24 new 6-wheel models!

GVW ratings, 22,000 to 90,000 lbs. with new INTERNATIONAL bogie or trailing axle. Engines from 130 to 356 horsepower. Choice of gasoline or LPG power. Diesel engines available in models with GVW ratings of 30,000 lbs. and over. Transmissions, axle ratios for any needs. America's most complete truck line—170 basic models from ½-ton pickups to 90,000 lbs. GVW off-highway models.

INTERNATIONAL HARVESTER COMPANY • CHICAGO

International Harvester Builds McCORMICK® Farm Equipment and FARMALL® Tractors . . . Motor Trucks . . . Industrial Power . . . Refrigerators and Freezers

→ Get the News! Alex Dreier "Man on the Go," daily NBC Radio, sponsored by INTERNATIONAL Truck Dealers.

INTERNATIONAL® TRUCKS

"Standard of the Highway"

WHAT
WHERE
HOW
Accidents Happen

An analysis adapted from reports in the final bulletin of the National Safety Council's Fleet Safety Contest for 1952-53 year

City Fleets

Intercity Fleets

WHAT

WHEN IT comes to the what of accidents for city fleet trucks, Fig. 1 shows that they have over three-fourths of their accidents with other vehicles, mostly passenger cars. While the driver may not be at fault, the need is indicated for more defensive driving as a means to better a fleet's accident rate and as a way to improve the industry's public relations.

THE NEED for defensive driving is even more apparent in the case of intercity fleet trucks, as indicated in Fig. 4 below. Half of the objects involved in intercity truck accidents were moving passenger cars! Little wonder it is so easy to find believers of anti-truck propaganda. And, most of these accidents happened with the truck going ahead, neither passing nor being passed.

Fig. 1. Object Involved

Movement of Vehicle	Total Accidents 100%		Moving Object 64%				Fixed Object 36%		
			Passenger Car 42%	Com'l Veh. 20%	Pedestrian 2%	Other	Bldg. or Fixture 16%	Parked Veh. 15%	Other 5%
	%	No.	No.	No.	No.	No.	No.	No.	No.
Going ahead	38	355	171	65	1	8	41	38	31
Passing	(14)	(127)	(54)	(21)	(0)	(2)	(17)	(23)	(10)
Being passed	(4)	(36)	(23)	(6)	(0)	(0)	(0)	(2)	(5)
Other	(20)	(192)	(94)	(38)	(1)	(6)	(24)	(13)	(16)
Backing	28	261	60	48	1	3	71	65	13
Turning	10	96	58	17	.....	.....	12	9	.....
In loading area	18	172	72	46	.....	3	21	23	7
Other	6	56	34	11	.....	5	1	2	3
Total	100	940	395	187	2	19	146	137	54

Fig. 4. Object Involved

Movement of Vehicle	Total Accidents 100%		Moving Object 74%				Fixed Object 26%		
			Passenger Car 50%	Com'l Veh. 18%	Pedestrian 1%	Other 5%	Bldg. or Fixture 10%	Parked Veh. 6%	Other 10%
	%	No.	No.	No.	No.	No.	No.	No.	No.
Going ahead	68	327	183	63	4	15	12	10	40
Passing	(12)	(56)	(32)	(14)	(0)	(2)	(0)	(5)	(3)
Being passed	(8)	(37)	(28)	(8)	(0)	(0)	(0)	(0)	(1)
Other	(48)	(224)	(123)	(41)	(4)	(13)	(12)	(5)	(36)
Backing	10	48	10	6	.....	4	16	10	.....
Turning	10	47	27	8	.....	2	2	5	3
In loading area	11	55	22	12	.....	1	16	3	2
Other	1	4	1	.....	.....	.....	2	.....	1
Total	100	481	243	89	4	22	48	28	46

An analysis of accident rates of 1427 fleets reporting in last year's National Fleet Safety Contest provides some experience data that may help others in improving the accident picture. The following charts show (1) movement, (2) location, (3) types of objects involved in traffic accidents for both city and intercity operation.

During the contest year, July 1 to June 30, 1953, these 1427 fleets with 362,662 vehicles operated nearly three million miles. They reported 55,057 accidents, or an average of 1.84 per 100,000 miles. While this may appear high, it should be noted that this tabulation considers as an accident *any* mishap that results in death, personal injury or property damage.

Figs. 1, 2 and 3 represent a summary of 940 accidents reported by city common, contract and private carriers. Figs. 4, 5 and 6 show similar data for 481 accidents reported by intercity common and private fleets during the contest.

WHERE

CITY FLEET trucks, as shown in Fig. 2, get involved in nonintersectional accidents twice as often as in intersectional accidents. Only in turning, as might be expected, are there more intersectional accidents than non-intersectional. Biggest hazard occurs when trucks pass other vehicles, indicating a need for training city drivers to provide for sufficient clearance.

INTERCITY TRUCKS have more accidents in urban areas than out on the open highway, see Fig. 5 below. And, like city fleets, most are non-intersectional accidents. Passing accidents for intercity trucks are not as frequent, however. Intercity drivers would seem to need more training in avoiding non-intersectional accidents on the open highway and in urban areas.

HOW

THE HOW of accidents emphasizes the need for training city drivers in providing sufficient clearance in congested city traffic. Almost half of city truck fleet accidents were sideswipes, as indicated in Fig. 3 below. Second high—over one-fourth of all accidents—are rearend collisions. Significant fact here is that city trucks do the hitting twice as often as they are hit.

TWO TYPES account for two-thirds of the how of intercity fleet truck accidents—sideswipes and rearend collisions. Interesting point in Fig. 6 is that intercity trucks seem to have most trouble going straight ahead, neither passing nor being passed. This may indicate that intercity drivers have most of their accidents when they feel safest.

Fig. 2. Location of Accident

Movement of Vehicle	Total Accidents 100%		City and Suburban 99%		Rural 1%	
			Intersection 31%	Non-intersection 68%	Intersection 0%	Non-intersection 1%
	%	No.	No.	No.	No.	No.
Going ahead	38	355	130	223	.....	2
Passing	(14)	(127)	(24)	(102)	.....	(1)
Being passed	(4)	(36)	(14)	(22)	.....	(0)
Other	(20)	(192)	(92)	(99)	.....	(1)
Backing	28	261	37	223	.....	1
Turning	10	96	66	30	.....	.....
In loading area	18	172	49	121	.....	2
Other	6	56	8	48	.....	.....
Total	100	940	290	645	0	5

Fig. 3. Type of Accident

Movement of Vehicle	Total Accidents 100%		Sideswipe 48%	Rear End 27%		Right Angle 13%	Head-on 6%	Non-collision 2%	Other 4%
				Struck 18%	Was Struck 9%				
	%	No.	No.	No.	No.	No.	No.	No.	No.
Going ahead	38	355	166	61	25	53	26	10	14
Passing	(14)	(127)	(100)	(9)	(3)	(8)	(2)	(1)	(4)
Being passed	(4)	(36)	(23)	(1)	(8)	(0)	(2)	(2)	(0)
Other	(20)	(192)	(43)	(51)	(14)	(45)	(22)	(7)	(10)
Backing	28	261	121	66	8	31	14	3	18
Turning	10	96	59	10	3	17	5	1	1
In loading area	18	172	80	25	35	16	13	1	2
Other	6	56	21	6	13	5	3	4	4
Total	100	940	447	168	84	122	61	19	39

Fig. 5. Location of Accident

Movement of Vehicle	Total Accidents 100%		City and Suburban 59%		Rural 41%	
			Intersection 22%	Non-intersection 37%	Intersection 4%	Non-intersection 37%
	%	No.	No.	No.	No.	No.
Going ahead	68	327	74	88	18	149
Passing	(12)	(56)	(7)	(13)	(2)	(34)
Being passed	(8)	(37)	(8)	(14)	(2)	(13)
Other	(48)	(234)	(59)	(60)	(14)	(102)
Backing	10	48	4	39	1	4
Turning	10	47	21	16	1	9
In loading area	11	55	6	34	2	13
Other	1	4	1	2	.....	1
Total	100	481	108	177	22	175

Fig. 6. Type of Accident

Movement of Vehicle	Total Accidents 100%		Sideswipe 37%	Rear End 32%		Right Angle 10%	Head-on 6%	Non-collision 9%	Other 6%
				Struck 20%	Was Struck 12%				
	%	No.	No.	No.	No.	No.	No.	No.	No.
Going ahead	68	327	125	60	33	35	20	40	14
Passing	(12)	(56)	(39)	(2)	(2)	(6)	(1)	(4)	(2)
Being passed	(8)	(37)	(23)	(4)	(3)	(3)	(1)	(3)	(0)
Other	(48)	(234)	(63)	(54)	(28)	(26)	(18)	(33)	(12)
Backing	10	48	11	20	4	4	1	.....	8
Turning	10	47	27	6	5	3	2	1	3
In loading area	11	55	18	9	16	5	5	3	1
Other	1	4	1	1	.....	.....	.....	.....	2
Total	100	481	180	96	68	47	28	44	22

Dealer shop gives "new bus service" to about 100 buses each year, is convinced that good PM service in first 6500 miles adds 25 per cent to vehicle's total life

By J. E. Schetky, Jr., Schetky Equipment Corp., Portland, Ore.

NEW BUS SERVICE Ups

SCHETKY EQUIPMENT CORPORATION
1810 S. E. 10th Ave. Portland 14, Oregon
Phone: FIlmore 5345

SCHOOL BUS INSPECTION REPORT

SCHOOL DISTRICT _____

BUS NO. _____ CHASSIS NO. _____ MOTOR NO. _____ YEAR _____
BODY MAKE _____ BODY SERIAL NO. _____ CHASSIS MAKE _____
MILEAGE _____ CAPACITY _____

The above school bus has been inspected by an authorized Service Representative of the Schetky Equipment Corporation for the purpose of informing the School Board of this district the general and specific condition of your buses. These buses carry your children — A PRICELESS CARGO — and we feel it a part of our duty to inform you of the repairs necessary on your buses.

INSIDE BODY CONDITION:

1. Glass (See reverse side) _____
2. Floor _____
3. Seat Backs _____
4. Seat Cushions _____
5. Paint _____
6. Dome Lights _____
7. Window Catches _____
8. Front Heater _____
9. Rear Heater _____
10. Defroster _____
11. Defroster Fans _____
12. Entrance Step _____
13. Entrance Step Light _____
14. Decency Panel _____
15. Flags and Flares _____
16. Fire Extinguisher _____
17. First Aid Kit _____
18. Mirror _____
19. Doors and Control _____
20. Wiring _____
21. Emergency Door Buzzer _____
22. Leakage _____
23. Wheelhousings _____
24. GENERAL _____

OUTSIDE BODY CONDITION: (Additional information over)

1. Mirrors _____
2. Paint _____
3. Lettering _____
4. Marker Lights and Reflectors _____
5. Turn Signals _____
6. Emergency Door _____
7. Stop Sign _____
8. GENERAL CONDITION _____

CHASSIS CONDITION:

1. Brakes _____
2. Clutch _____
3. Instruments _____
4. Lights _____
5. Windshield Wipers _____
6. Front Fenders _____
7. Fender Flaps _____
8. GENERAL CONDITION _____

Date _____ Service Repre _____

At left. This form serves as report to school board after inspection is made of vehicle's condition

At right. Driver bringing school bus in from factory reports all "bugs" on arrival

After bus in Portla

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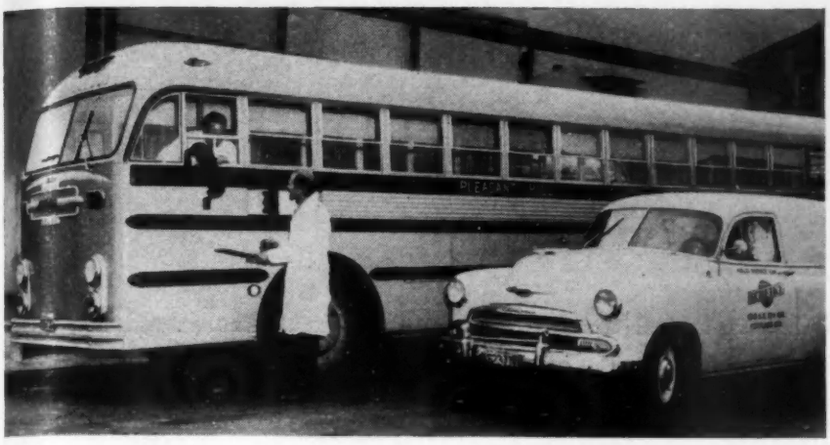

After bus is in use, service checks at 2000 and 4000 miles are made, either in Portland shop or in the field by serviceman with especially equipped truck

School Bus Life

WE REPAIR, on the average, 180 buses during June, July, and August each year. We give what we call our "New Bus Service" to approximately 100 buses each year. From what we have learned from our yearly repair and rebuilding work, we are convinced that the PM service given a bus the first 6500 miles accounts for an additional 25 per cent safe life as a minimum.

Each new bus is given three separate servicings: 1. The first service is given when the bus is driven out from the factory and before it is turned over to the regular driver. 2. The second service is given when the bus has been driven 2000 miles by the regular driver on regular duty runs. 3. The last service comes when the bus has been driven 4000 miles in regular duty.

Service No. 1

THE majority of school buses are driven out from the factory by a member of the school board and not the district's mechanic or one of the regular drivers.

Before the man driving out a new bus leaves for the factory, he is asked to spend at least two hours with one of the shop foremen at the shop here in Portland. In this way we school the unexperienced bus driver in what to watch for in the way of adjustment needs and pre-service repairs.

This driver will be with the new bus from three to six days. We ask him to list in a notebook everything he finds the matter with the bus. We also ask him to list things which he does not understand, even though he feels there is nothing wrong.

The man driving out the bus is required to stop at our shop before he delivers the bus to its regular driver. This is our *first service*, which consists of the following:

1. Checking the "Cry Sheet" with the man who drove the bus out from the factory and correcting *to his satisfaction* every fault listed on this sheet.

2. We first gave the bus body a thorough check, consisting of inspecting and tightening all body bolts, checking electrical system, heating system, each individual seat, check for state requirements under safety code, giving body complete lubrication, clean bus inside and out and wax the floors. This service cost us approximately $25.

3. Next we check and adjust engine, adjust brakes and steering gear, check transmission and rear axle, adjust clutch, check and adjust all lights, reset governor, check electrical system and adjust voltage regulator, and road test.

The entire inspection and servicing, including the work on the body is a 32 man hour job and we allow $100 for it, or $75 additional to the cost of servicing the body.

Services Nos. 2 and 3

FOR services Nos. 2 and 3, which are at 2000 and 4000 miles driving after the bus has been delivered from the factory (that is, not counting the estimated 2500 miles mileage out from the factory), we ask that the bus be brought into our shop. If this cannot be done, we have a service car and trained serviceman who will make a call and handle the major part of the 2000 and 4000 mile service.

These services are similar to service No. 1. The bus driver and mechanic are asked to keep "Cry Sheets," which are checked by our foreman if the bus comes to our shop and by our field serviceman, where the service is handled in the field.

The cost on the 2000 and 4000 mile service is less than the cost for inspection and general service when the bus is brought out from the factory.

On all buses which cannot be brought to the Portland shop, the same service is given except for the washing, waxing, inside cleanup and the lubrication.

Yearly Fleet Checkup

ONCE yearly our field service representative calls on every bus fleet which contains buses which we have sold. On these calls the serviceman makes a complete check on each bus which is over one year old. At the completion of this inspection the inspector fills in a trip-inspection report. One copy is given to the mechanic who looks after the bus or to the driver who has charge of it. One copy is for our company file and the third copy (the red sheet) comes to us and is then mailed to the superintendent in charge of the operation, whether it be school supt or logging supt or general construction supt. A personal letter accompanies this report and explains in full the facilities of the Schetky shop and gives a rough estimate on the work suggested to bring the bus to good

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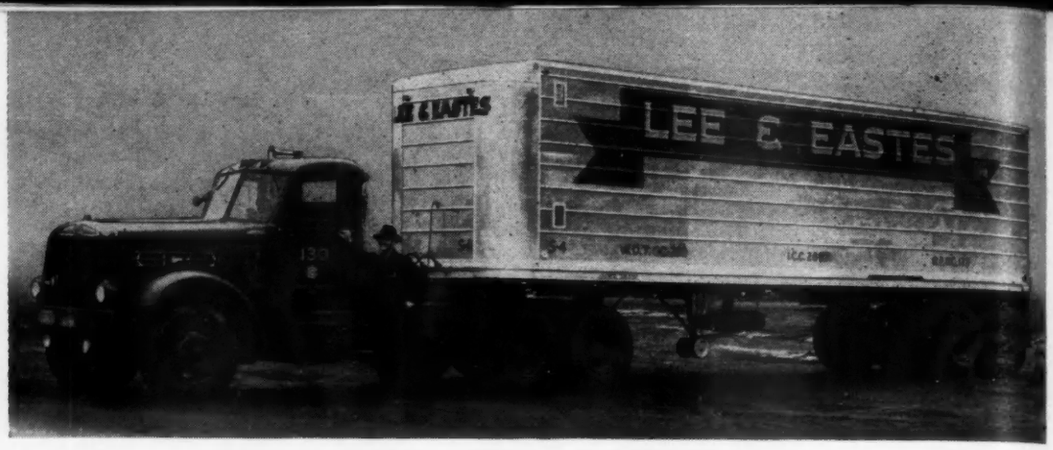

An important fleet in the Pacific Northwest, Lee & Eastes is relatively small compared to others in the area. CCJ's editor took a look at its shops, reports it has everything the big fleets have and in some cases more

You Don't Have to be BIG to

***A Fleet Shop Visit* By Bart Rawson**

A HIGHLIGHT of a recent stay in Seattle was a trip through the Lee & Eastes headquarters shops. Our overall impressions can be summed up in these few words: "You don't have to be big to be good!"

Right away that needs amplification. For Lee & Eastes is one of the most important common carriers in the Northwest. Its president, George V. Eastes, has for years been national treasurer of the American Trucking Assns. Its competitors in both dry freight and petroleum products know well the tremendous volume the line carries within the area it serves.

But in a land where mileages are legend and numbers of vehicles often run high in the hundreds, Lee & Eastes is relatively short in both route miles and number of vehicles. To be exact it has 67 highway power units (most of them Kenworths, Sterlings and Freightliners), 81 trailers and 51 pick ups. Its longest route is the 230 road miles to Pasco, Idaho, and all of its routes are generally within the triangle formed by Seattle in the north, Portland in the south and Pasco in the east.

It was this combination of high importance and relatively small size that made us wonder what kind of a shop such a fleet would have? The answer: Everything the big fleets have and in some cases more!

Body Shop Practices

TAKE the body shop for instance. It is equipped with both machines and manpower to handle any job, including minor and major repairs, complete rebuilding and even new fabrication. Most of the fleet's trailers and many of its bodies are standard Brown units shipped in from the nearby factory in Spokane. But many are modified or of special design. A few examples will illustrate the point.

As we all know reefers create special problems. There is always the dampness boogie. Metal floors rust, wood floors rot and insulation absorbs moisture. In such a case Lee & Eastes buys the body knocked-down, assembles it in its own shop just the way it wants it. The maple or mahogany flooring, after it is tongued and grooved, gets a 15-hour bath in linseed oil, heated for the first three hours to 175 deg. F., then allowed to cool gradually for the remaining time. Effect? Wood is so thoroughly impregnated that years later you can put it in a vise and watch the oil squeeze out. Result? Flooring that lasts years longer even when constantly subjected to moisture.

Insulation gets similar care and attention, carefully installed and even more carefully sealed. Hardware must be of the best to resist both wear and moisture. Door frames are reinforced; seals installed and lined up

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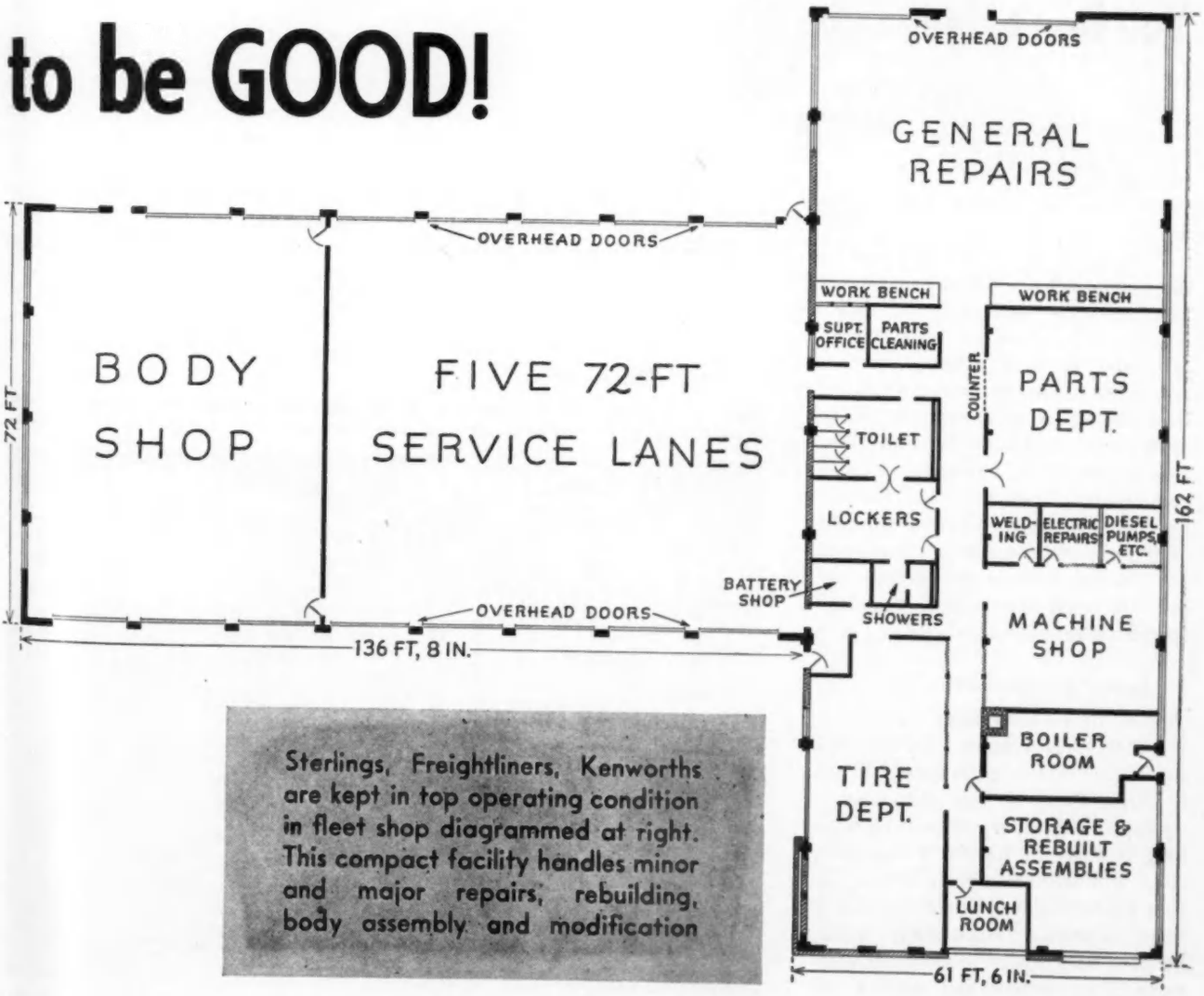
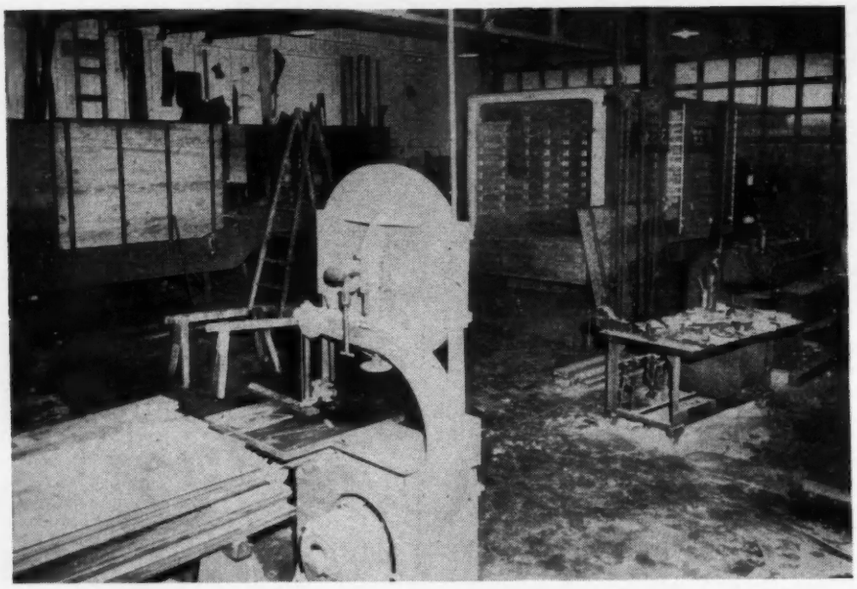
BIG to be GOOD!



Sterlings, Freightliners, Kenworths are kept in top operating condition in fleet shop diagrammed at right. This compact facility handles minor and major repairs, rebuilding, body assembly and modification



Bodies are purchased knocked-down and assembled to suit fleet's needs in this fully equipped body shop. Finished cost is about the same as standard models

You Don't Have to be BIG . . .

Continued from Page 68

with great care. Total cost? About the same as the standard ready-made job.

Such a job is being assembled in the right background of the accompanying body shop picture, above. At the left is a low bed trailer being fabricated for special heavy machinery hauls. Sides are removable and load stresses have been engineered to meet the particular needs of the fleet. Cost again will be about the same as commercial production, but the design will be exact. The general rule of thumb—standard production jobs are purchased as such; special jobs are fabricated or modified to satisfy specific requirements.

Ready Access Service Lanes

NEXT to the body shop are five 72-foot service lanes. Design and use of this area is quite standard but it should be noted that each lane is equipped with doors at both ends, is long enough to handle a complete truck and full trailer train or may be split to handle two single units at a time. Portable lubricators, workbenches and power tools make easy work of inspections and running repairs on the company's truck fleet.

The most intriguing part of the shop lies in the efficiently designed major service wing shown in the right (vertical) section of the accompanying lay-out plan. Again both design and work flow follow more or less standard procedures but everything is complete, particularly for a fleet of this size.

The general repair area looks normal in every way, even to the fact that it is not particularly photogenic. But it is equipped with long work benches on both inner walls, a power driven chain fall that can handle all major components including engines, exhaust ports through the roof, air-circulating space heaters, and all of the equipment needed for general repairs. While there is a separate welding room provided, much welding must be done on units too large to move, so both gas and electric welding gear is found on the main floor. Electric and air outlets are within easy reach of any floor location.

All major components are removed from road vehicles in the general repair area, and then rolled out for cleaning and disassembly in a shed located back of the main shop. On the way back parts may be dropped off for further cleaning in the big tank located in the cleaning room. Eventually all end up in the machine shop (pictured below) where actual rebuilding takes place.

Here may be found the lathes, the boring bars, the valve grinder, the power hack saw, the drill press, the arbor press, and other pertinent equipment.

Immediately adjacent are three separate rooms for small parts welding, electrical repairs and diesel in-

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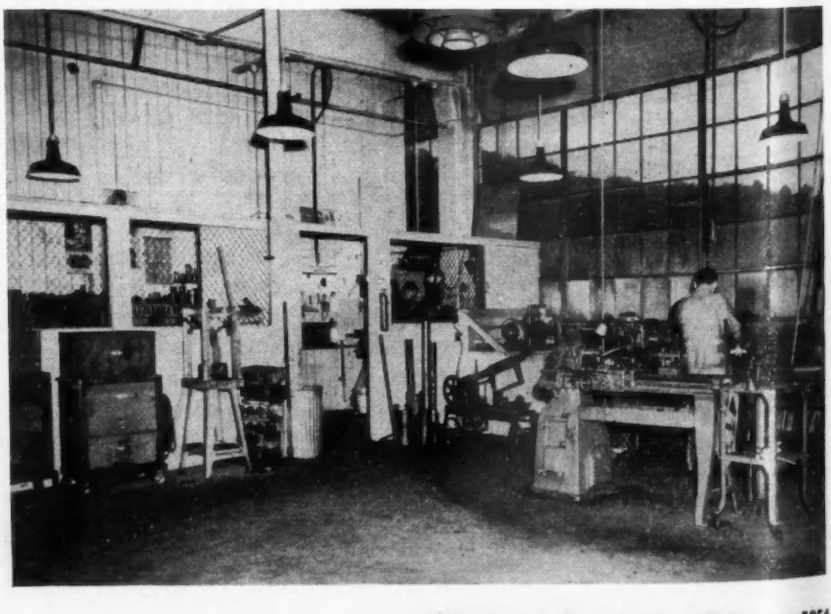
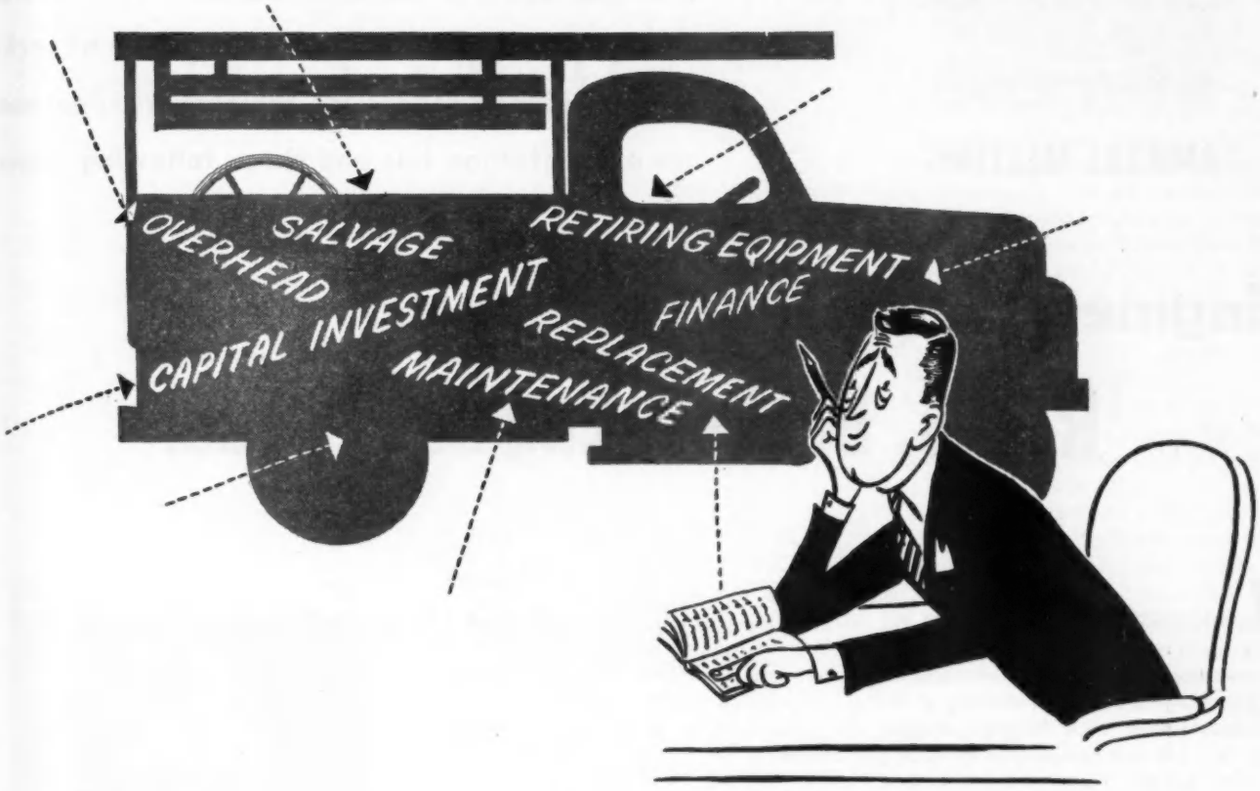
Part of machine shop's separate work areas for small parts welding, electrical repair and diesel injector and pump maintenance are shown at left below



Utility Operator Takes a Critical Look at LEASING



Comparative figures cited on the merits of leasing mean little to the utility fleet with specialized equipment

By R. O. Babcock,
Transportation Dept. Manager
Consolidated Edison Co., New York City

LEASING sounds wonderful, but is it? Many proposals for the hiring of automotive equipment are received from time to time, and all of them appear to offer considerable savings.

Some of them stress particularly the elimination of maintenance costs, administration costs, and point out that before the equipment wears out it will be replaced by a new unit, and then proceed to cite fabulous savings, usually on a mileage basis.

They also point out, in some types of truck leasing, that the charges will drop to only a small fraction of the monthly charge at the end of the leasing period and that if the lessee elects to lease a new truck, he will be credited with 85 to 90 per cent of the salvage value of the old truck.

Unfortunately no two fleet operations are alike and this is particularly true of the public utility companies whose vehicle requirements and cost of operations vary widely even when compared with seemingly similar fleets within the same general field. It is for this reason that comparative figures, often furnished in articles dealing with the relative merits of leasing arrangements, mean little to the public utility operator or to others whose requirements are specialized.

But there are certain general principles that apply to all leasing operations. These can best be explored by analyzing the leasing companies themselves, considering the distinctly different fields of both passenger car leasing and truck leasing.

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ANNUAL MEETING

Transportation & Maintenance and the Truck & Bus Activities pull a record attendance at technical sessions. Papers of interest to fleetmen are excerpted on this and three following pages

Engineers Discuss

Roads, Brakes, Engines & Fuel

LARGEST Annual Meeting in the organization's history — over 4500 attendance—greatly expanded engineering display—a memorial evening at the annual dinner with William Hazlett Upson—and technical sessions covering a wide range of important subjects—that was the Annual SAE Meeting in Detroit last month. And if you didn't meet your friend until well into the middle of the week, it was because he was "cramming." Sessions were so packed that seats were not always available at both the Sheraton-Cadillac and Statler Hotels.

Seldom has the Annual Meeting held such an array of interest to such a wide cross-section of members. Technical sessions dealt with drive line units for high speed truck engines, heavy-duty brake maintenance, plastic bodies, highway weight problems, head gasket problems as well as scores of subjects of interest to aircraft engineers. New developments in engines, transmissions, fuels and lubricants came up for discussion later in the week.

William Hazlett Upson, author of the "Earthworm Tractor" stories and guest speaker at the Annual Dinner, provided an evening of delightful entertainment on Wednesday. Officers for the year were presented at the business session. New vice presidents fleetmen will want to know are H. L. Willett, Jr., of Willett Truck Leasing Co., Chicago; and R. C. Wallace, Diamond T Motor Car Co., Chicago. These men will head the Transportation and Maintenance Activity and the Truck and Bus Activity, respectively during 1954.

Here are excerpts from some of the papers:

Hoy Stevens . . .

Bureau of Public Roads

SEVERAL years ago a committee of the Highway Research Board was given the assignment of developing economic data pertinent to the truck highway size and weight problem. Hoy Stevens, acting as secretary of this committee, outlined the pattern of research and study to the SAE membership in what might be described as a progress report.

Problem, of course, is one of locating the relation, both engineering- and cost-wise, between pavements, vehicle weights and intensity of traffic. In laying groundwork for the research, three studies will be made; (1) a study of truck operations costs, (2) a study of highway operations costs, and (3) a study of commodity movements and shipping densities.

When data are completed, it is expected that information will be available from which to base sound judgments with regard to figuring optimum size and weight specifications—a design guide for vehicles, highway and trucking services.

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President—1954

WILLIAM LITTLEWOOD, vice president for engineering of American Airlines, Inc., Washington, D. C. A graduate of Cornell University, Mr. Littlewood was first vice president of the SAE Air Transport Activity when it was organized in 1935. At that time he was awarded the SAE Wright Brothers Medal for the year's outstanding paper on aeronautical engineering. He has been active in the work of such organizations as the Institute of The Aeronautical Sciences, National Advisory Committee for Aeronautics, Air Transport Association, and Coordinating Research Council. Currently he is a member of the Committee on Aeronautics, Office of the Assistant Secretary of Defense (Research and Development.)

Engine Head and Gasket Problems

Poor fuels, engine lugging, careless use of starting fluid and careless maintenance can result in gasket failures, says this well known operator

By L. E. Kassebaum
Consolidated Freightways, Inc.

IN MANY fleets, one of the major maintenance costs is that of cylinder head replacement. It is more prevalent today, apparently due to the fact that more and more design is developed into the valve-in-head engine. In the L head design there was more opportunity to control stresses in a plain cylinder head but, when adding all the valve openings, it has resulted in eliminating a condition that existed in the block and transferred it to the cylinder head. The worst situation is that of cracking between valve seats. Some of this trouble has been eliminated by installing hardened cast in—screwed in—pressed in steel inserts in the valve seats but even this practice does not fully correct the situation. Either a cracked seat or insert does untold damage to valves and causes premature failure.

In our fleet of five hundred and fifty diesel engines, records reveal that the average of all heads removed for all reasons is from 30,000 to 45,000 miles. This may be cracked or porous heads, valves, gaskets, regular engine overhaul or for other miscellaneous reasons. When trying to determine whether the necessity for removing the head is caused from gaskets or not, it is sometimes difficult to evaluate the failure. While there are instances of heads operating satisfactorily for 80,000 or 90,000 miles, invariably when they are pulled at lower mileages or around the average mileage, the condition of the gasket indicates that it had served its useful life. Instances occur when gaskets fail before a vehicle leaves the shop. In some cases, it could be a defective gasket, but apparently there is no way of determining this.

The pattern and specifications for torquing cylinder stud nuts are adhered to religiously but there is always the chance for human error. Manufacturer's recommendations are adhered to in setting sleeve heights. Some changes in specifications on various types of engines has recently been made and it is hoped improvement in sealing will result.

Gaskets

GASKETS on any one type of heavy duty diesel engine seem to fail at the same place. It is at the point on the outside of the combustion chamber and nearest the exhaust valve. Experiments with stainless steel grommets at this point have helped increase gasket life.

Fleet operators are not entirely blameless for a good portion of head and gasket failures. Poor driving habits and poor maintenance practices can cause trouble as easily as poor materials or design. Some of the factors controllable by operators and that result in mechanical failures of heads and gaskets are:

1. Use of poor fuels.
2. Lugging engines.
3. Operating at constant full throttle.
4. Promiscuous use of starting fluid.
5. Loose maintenance habits.
6. Use of inferior materials.

A result of the above list of poor practices is detailed as follows:

Use of poor fuels—Diesel fuels without the proper cetane will cause ignition lag with corresponding increase of maximum compression pressure which is a bugaboo of head gaskets. Gasoline fuels without proper octane rating for the compression ratio will cause detonation with resulting increase of maximum compression pressures. This condition is also associated with imroper ignition timing.

Some of the new high compression V-8 engines are having considerable trouble with detonation at sea level even on premium grades of gasoline. This is especially true after a few thousand miles of operation and the resulting carbon build up.

Lugging engines—In either gasoline or diesel engines, lugging manifests itself in either blown head gaskets or failing of con rod bearings. This is due, of course, again, to extreme compression pressures encountered.

Constant full throttle operation—It is general knowledge that any engine will not give what we consider satisfactory life at constant full throttle. This condition will cause burned exhaust valves, blown head gaskets, and certainly short bearing life. Engines simply are not designed to withstand the high exhaust temperatures and pressures that are prevalent under these conditions.

Promiscuous use of starting fuel—Anyone who has been around a diesel oeration in cold weather has undoubtedly heard engine knock and rattle when ether is being used. While it can't be said that this will directly cause blown head gaskets, it certainly would seem to be a sensible approach to control the amount of starting fluid that is fed to the engine.

Loose maintenance habits—This field covers a multitude of contingencies. We might say that many operators relax somewhat in their maintenance habits until a certain problem presents itself. At this time, all known preventive maintenance practices will be tried one by one or all at once to cure the problem. This would include such items as torquing, re-torquing, fuel pump settings, exhaust temperatures, valve backlash, cylinder liner protrusion, etc.

Use of inferior materials—Some op-

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How to STOP a Tru

ANNUAL MEETING

Manufacturers show what you can expect in braking efficiency—with proper design, better balance, improved maintenance practices

Maintain at 100% Efficiency

Ralph K. Super
Timken Detroit Axle Div.
Rockwell Spring and Axle Co.

THE ENGINEERING concept of commercial vehicle brake power, which is the original or new condition of the brakes, is predicated on two facts. The first is the coefficient of adhesion of the tires and the road. A number of years ago the tire companies ran a series of tests which indicated a tire adhesion factor varying from 1.0 for new tires on dry clean cement to a figure of .3 or .4 on sandy or wet surfaced highways with work tires. As a result of this information, the tire companies published information to the effect that a factor of .6 was average and related to the coefficient of adhesion of partially worn tires in their relationship to an average road surface.

The second concept of brake power relates to the safe handling of the load on the vehicle. In the case of buses with passengers, especially standees, the rate of stopping is extremely limited. In the case of commercial vehicles, the body design and characteristics of the load largely determine the maximum rate of braking. From the standpoint of bus braking ability, the safety of the passengers in the bus is of primary importance and the brakes must not be of such power as to throw the passengers around with resultant injury. In the case of trucks and trailers, the rate of braking must be limited so that the load will not slide along the floor or overload the vertical body members such as the headboard with resultant failure of these parts and dumping of the load onto the highway.

It is now pretty well established by many years of usage that a stopping distance rate on a vehicle possible with a .6 adhesion factor between the tire and road is the maximum that seated passengers on a bus or a well packed load on a truck can stand. This .6 adhesion factor corresponds to a resultant stopping distance of 22 ft from 20 mh or a rate of deceleration of 19.3 ft/sec/sec. This figure has found wide usage in brake engineering and relates to the brake power originally built into the vehicle. Incidentally, it is also found in a number of legal requirements for brakes.

If reference is made to the introductory statements, it is evident that the 100 per cent factor is the braking power mentioned above and that the basis on which this factor has been established should now be quite clear. This 100 per cent performance, or new brake performance, is possible with completely maintained or completely rebuilt brake equipment. This, of course, is the maximum of brake maintenance.

Brake Ability Surveys

A NUMBER of traffic surveys have been made covering operational brake requirements for buses, trucks, street cars, taxicabs, and passenger cars. From these surveys, a deceleration rate of around 8 ft/sec/sec covers the

Truck Safely

Editor's note—Two papers from this five-man symposium are condensed here. R. H. Moore, of Conestoga Transportation Co., discusses balancing procedures from an operator's standpoint in CCJ, January, 1953. Warner's Electric Brake, subject of another paper, is described in CCJ, August, 1953.

average braking rate for either congested traffic operation or boulevard and open highway driving. These same traffic surveys reveal that emergency traffic requirements for brakes seldom exceed 12-13 ft/sec/sec. Using this information in conjunction with various nation-wide surveys on actual brake stopping ability of commercial vehicles, it was indicated that a rate of deceleration equivalent to a stopping distance of 30 ft from 20 mph was a good performance. It is evident that a maximum emergency braking ability based on a traffic requirement of 12-13 ft/sec/sec and an actual measured ability of the vehicles on the highway of 14.3 ft/sec/sec (30 ft from 20 mph) would indicate that the latter figure or 14.3 ft/sec/sec is the minimum maintenance requirement for brakes. The deterioration of the brakes on a vehicle is therefore between the design or original performance of 19.3 ft/sec/sec and 14.3 ft/sec/sec or a loss of efficiency of approximately 25 per cent.

This is a relatively narrow range in which to maintain equipment and the first impulse is to increase the performance at the upper limit. This is a desirable effect, particularly if intentional overloading is recognized but the control and safety of the unloaded vehicle then becomes a problem. There is no brake control problem more illustrative of the bad effects of overbraking than that of a tractor operating with no trailer and having only the fifth wheel as a rear axle load. Invariably, the most careful application of the brakes will result in wheel lock.

If it is assumed that the above range of brake performance is the basic maintenance requirement, the ability to economically service brake equipment to operate consistently in this range becomes a question of the selection and application of brake sizes and designs.

The relationship of brake sizes and designs to maintenance is quite often overlooked or not emphasized sufficiently.

Balance Time and Pressure

Stephen Johnson, Chief Engineer
Bendix-Westinghouse Air Brake Co.

BRAKE balancing can be of two distinct types: pressure balancing and time balancing. Pressure balancing is the uniformity of pressures at which the brake shoes of all the wheels come in contact with the brake drums. Time balancing is the uniformity of time in which the brakes of each axle reach a predetermined pressure. In the case of air brakes, time balancing is the uniformity of air application times.

Pressure Balancing

PRESSURE balancing has had more consideration in bus operation, while time balancing has had more consideration in tractor-trailer combinations. Pressure balancing is measured at relatively low pressures, approximately 5 psi, and its importance in bus operations is emphasized because the majority of braking pressures, actually used, are also relatively low.

Time Balancing

TIME balancing or uniformity of air application times has received considerable attention in tractor-trailer combinations. This is natural due to the combination of vehicles and, if for no other reason, the length of connecting tubing between the brake valve of the tractor and the rear axle of the trailer or trailers.

Probably the only important benefit afforded by reduced air application times is the effect on stopping distance. Stopping distance or stopping time consists of several factors. One of these is driver perception-reaction distance or

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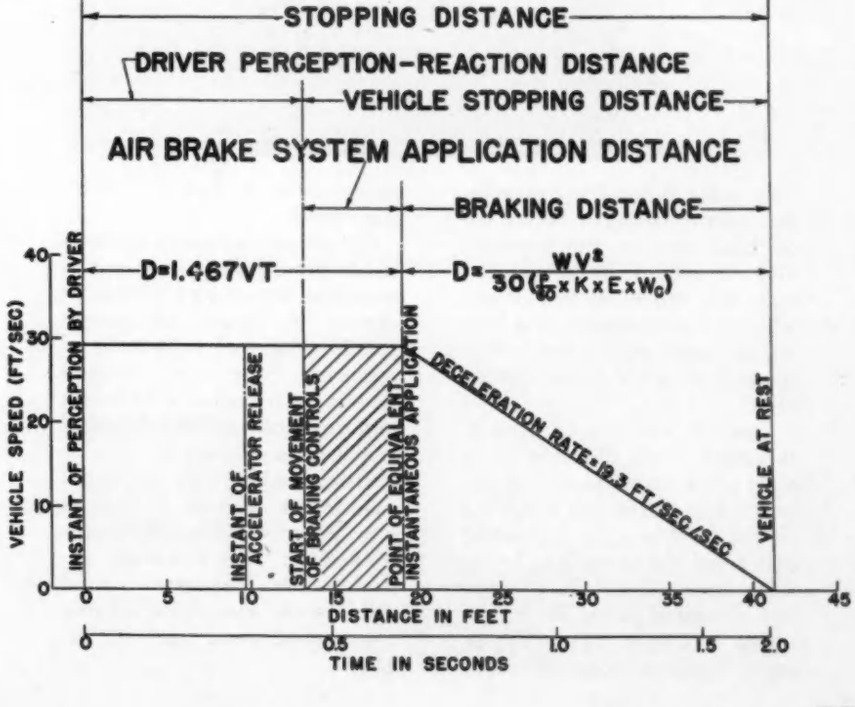

Shop Hints

Here are some swell time savers for fleet shops. Let us have your ideas for new tools or short cuts to service. We'll pay $10 and $25 for good ones.

$25

Traveling Lift for Pit Work

By Bob Loy, Cincinnati Transit Co.

In order to facilitate installation and removal of heavy assemblies such as transmissions, motors, etc., I designed and built this traveling lift. Now, with an air wrench, the mechanic can raise and lower these units quickly and without effort.

The lift consists of a 2-in. threaded shaft mounted in a steel plate carriage at the top and set in a bearing mounting at the bottom. The actuating unit is an old street car brake wheel grooved to take a V-belt and threaded to the shaft. This wheel is turned by a 2½-in. drive V-pulley mounted on a square drive assembly to fit an air wrench.

This assembly rides in a cradle made from heavy iron and is mounted on cross plates as shown. A sliding adjustment provides for belt tightening as required. Four 6-in. flanged wheels are mounted at the sides and travel along rails imbedded in the sides of the pit.

There is a provision for lateral adjustment behind mechanics arm. A screw shaft and nut are welded to the elevating assembly base. The screw is turned with the air wrench for moving the assembly sidewise as required.

Work Bench Extension

By Dean Klippert
Carnation Co.
Los Angeles, Cal.

I have added an extension shelf to my workbench and find that it is much handier to use now. It provides a good place to lay extra tools or parts from a truck. The shelf is hinged to the top of the bench and is held up by a two-piece supporting rod. The rod is folded inward on a pin

Tool Pulls Axles on KB1,

By William J. Buchman
Greenwood, S. C.

Here is a drawing of an axle puller which I built in my spare time out of salvaged pipe, a threaded shaft and two nuts. It fits KB1, KB2 and KB3 International trucks, and maybe others. Parts needed are two ⅞-in. SAE nuts, a length of fine-threaded shaft, a washer, a piece of 2-in. pipe

Brake Diaphragms Make

By F. J. Highberger
Sheeley Baking Co.
Emporia, Kan.

When working on the front end of a vehicle, it is annoying to put a box or container within reach on the fender and then have it slip around or fall off. A nonslip, scratch-proof holder can be made from used trailer

Wire File Brush Renews

By Frank P. Coulomb
Inglewood, Cal.

Metal polishing cloth wheels often get clogged with polishing cake material and, in time, become glazed and shiny and loose their polishing action. With a steel wire brush, such

Wrench Tightens Pulleys

By Joseph S. Tokasz
Hubbard, Ohio

Here is a wrench I use to tighten air compressor pulleys on White truck engines. Take a piece of 5/16-in. thick flat iron 4 in. long and round the edges as shown. Cut a ½-in. square hole in the center for a ½-in. drive. Two pins of ⅜-in. diameter

Shelf Folds Out of Way

$10

hinge when the shelf is not in use. It has a collar that slips over the extended end of the lower section to hold it in place for use. The base of the support rod rests on a short piece of angle iron. When the shelf is down, its outside end fits just inside this angle iron.

KB2, KB3 Internationals

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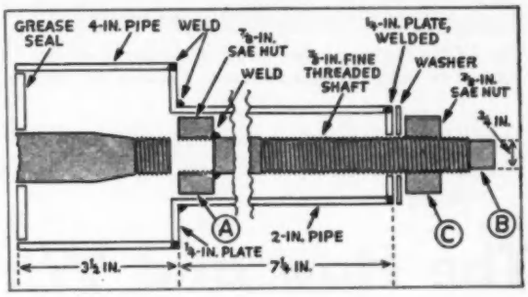

7¼ in. long, a piece of 4-in. pipe 3½ in. long, and some scrap ¼-in. steel plate. When assembled as in the diagram at right, all you have to do is screw nut A onto the axle and then, holding the shaft from turning with a ¾-in. wrench at point B, tighten nut C and out comes the axle.

Non-Slip Parts Holder

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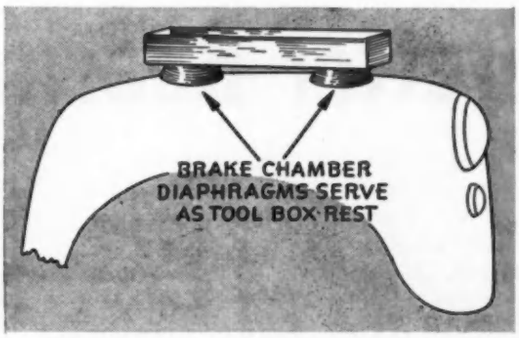

air-brake diaphragms. Trim them until they resemble two large suction cups and bolt to the bottom of a tool box or parts tray. A single diaphragm trimmed in this manner also makes a handy holder itself.

Cloth Polishing Wheels

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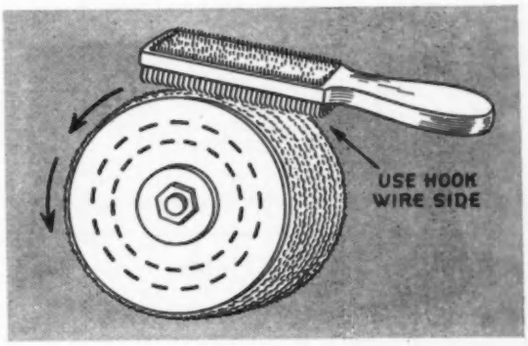

as a double-sided file cleaning brush or those used for cleaning card cloth, I find I can clean and true-up the wheel quickly using the hook side of the brush as illustrated.

on White Compressors

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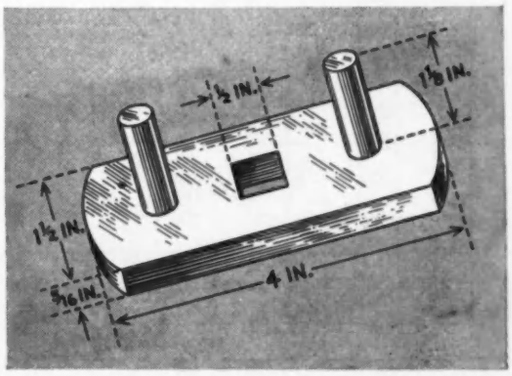


stock cut 1⅛ in. long are set in the flat iron with centers 2 15/16 in. apart. This wrench will then fit in the pulley snugly so that the base rests close to the pulley, making it easy to turn the ½-in. drive with a ratchet wrench in tightening the pulley.

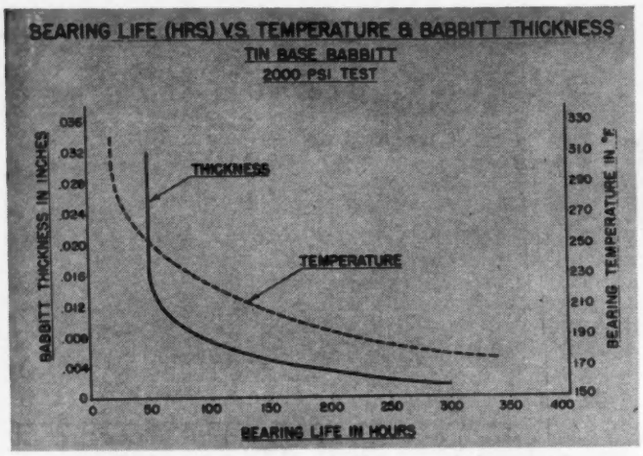


Fig. 1. Life expectancy of tin-base babbitt varies considerably with the temperature as seen in the graph above

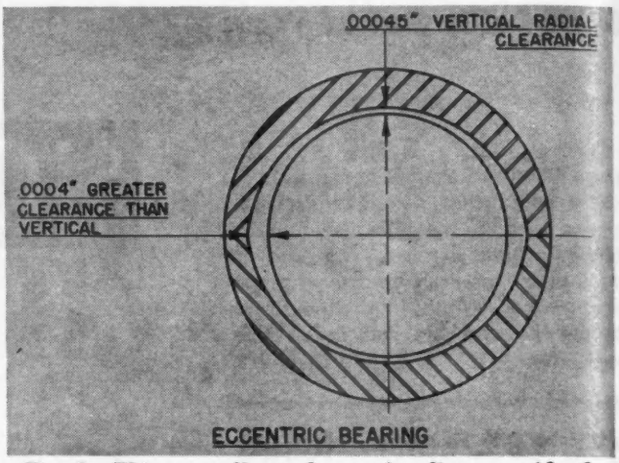
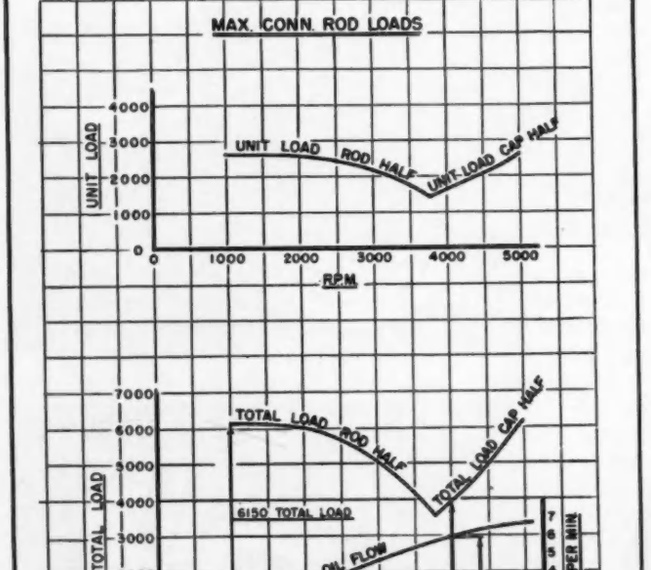


Fig. 2. Thinner walls at the parting lines provide the required horizontal clearance in the bearing assembly

The How and Why of
Better Bearing Maintenance

Fig. 3. A typical plot of bearing loads and engine oil flow against crankshaft rpm. Note that engine lugging as well as high speeds increase the bearing loads rapidly



By L. Schamadan,
Field Engineer, Cleveland Graphite Bronze Co.
Division of Clevite Corp., Cleveland, Ohio

A GREAT many premature mechanical bearing failures are, in one way or another, due to excessive bearing temperatures. Dirt, the prime offender in engine failures, on either the bearing back or in the bearing surface means that clearances are reduced and high spots are taking more than their share of the bearing load. The result is high temperatures which promote rapid fatigue failure.

As indicated in Fig. 1, the life expectancy of tin-base babbitts varies considerably with temperature. This same general curve also applies to copper-lead bearings.

Insufficient bearing clearances also cause elevated temperatures. Reduced clearance spaces do not allow an adequate flow of oil and the heat generated within the oil film itself cannot be dissipated.

Most bearings are designed so that the assembled horizontal clearance is 0.0005 to 0.002 of an inch greater than the vertical clearance. The original design of the bearing is based on a round bore plus the elastic deformation of the housing that contains the bearing. Therefore, if during prior

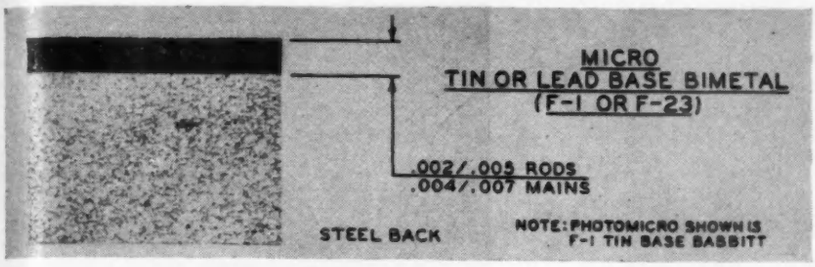


Fig. 4. Above. Micro babbitt thicknesses are susceptible to dirty lubes

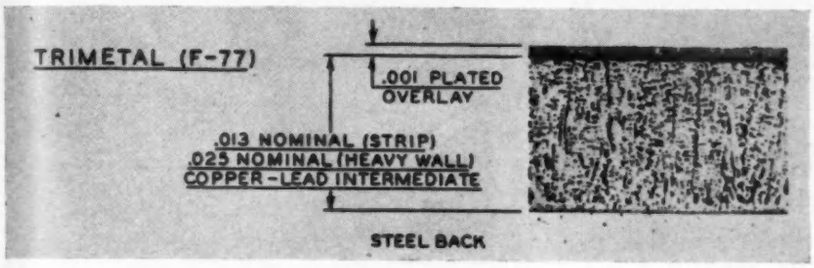


Fig. 5. Below. The tri-metal bearing has improved carrying capacity, has been designed to withstand pounding and flexing inherent in bearing use

Overheating, overloading, careless fitting practices accelerate bearing wear. Here's how to improve mileage

operation, a bore should go out-of-round, it will upset the design balance that is engineered into bearing walls.

Bearing walls are not uniform in thickness from the parting lines to the centerline but are actually tapered or eccentric. Thinner walls at the parting lines, as illustrated in Fig. 2, provide the required greater horizontal clearance in the assembly. These greater horizontal clearances, in addition to preventing journal pinch, allow greater oil flow and lower operating temperatures, and at the same time, vertical clearances can be kept low enough to prevent bearing knock.

Overhaul Problems

DEFECTIVE assembly, or the assembly of defective parts, usually means that a reduced portion of the bearing area is taking more than its share of the load while the rest of the bearing is just going along for the ride. Hourglass journals, tapered and out-of-round journals and bores, misalignment of shaft journals and bearing bores, and tapered bearing wall along the length of the bearing are all defects which will cause overloading of bearing surfaces. All of this means that it is extremely important to spend an extra half hour or so measuring the parts that go into a build-up if premature failures are to be eliminated.

Without going into the chemistry of corrosive acid attacks on bearings, it is well to point out that the organic acids responsible for these attacks are formed during high temperature lubricating oil oxidation. Here again is a good reason for spending a little time on an assembly job because it doesn't take much of a temperature change to affect the rate of reaction of a chemical process, and it doesn't take much of a defect to boost the operating temperature of a bearing.

Engine operation not in accordance with the manufacturer's recommendations will cause early bearing failures. Fig. 3 is a typical plot of bearing loads and engine oil flow against crankshaft rpm. Under "lugging" conditions of high gas pressures and low speeds, the oil flow has not yet built up to the point where maximum bearing cooling is obtained, and prolonged operation in this speed range is destructive to the engine. Again at high speeds the bearing loads increase rapidly and if engine speeds are high enough actual rod stretching will be experienced. Proper driver training, therefore, is essential so that fairly constant speed operation in the range of minimum bearing loading is obtained.

Good bearing maintenance requires a knowledge and understanding of some of the facts concerned with bearing material appearance, bearing construction, and bearing installation. That simple little bearing represents considerable engineering, development, and testing work on the part of many people.

Bearing material selection is, of course, the responsibility of the engine designer. However, it is the responsibility of the rebuilder to replace original parts with parts of comparable quality of manufacture and material. The conscientious rebuilder must learn to know the bearing materials by sight. He should recognize the smooth broached surface of a babbitt bearing and the dull frosted surface of a precision, overlay plated, copper-lead bearing. Details of mechanical design must be checked on every piece that goes into an engine build-up.

Bearing Metals

THE old standby in bearing materials is babbitt. It is soft and will absorb a lot of dirt. It has a low coefficient of fricton and allows operation with cast iron or steel shafts whose hardnesses can be as low as 170 Brinell. Babbitt material, either lead base or tin base, is metallurgically bonded to a mild carbon steel back. The babbitt can be of almost any thickness, except that we now realize the importance of keeping the babbitt quite thin for heavily loaded applications. Fatigue life (ability to resist the repeated stressing imposed by cyclic loads) of this type of bearing greatly increases as the thickness of the babbitt drops below about 0.008 in. Automotive engines are today using micro babbitt thicknesses on the order of 0.002 to 0.004 in. The use of the thin babbits must of neces-

(TURN TO PAGE 110, PLEASE)

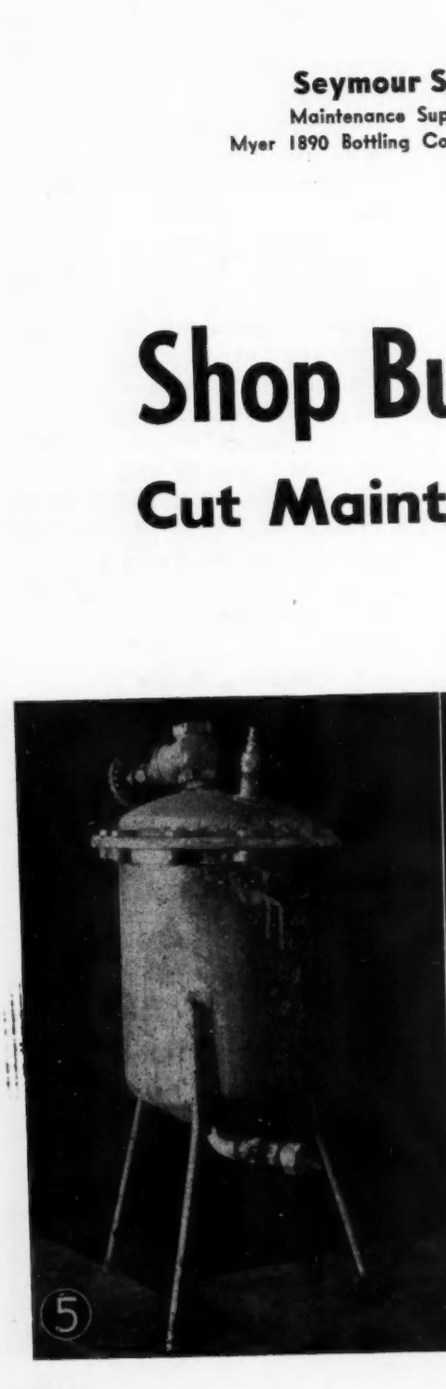
We put everything but the men's room on wheels when we made these maintenance aids from scrap parts. They provide flexibility and speed, says . . .

Seymour Steiner,
Maintenance Superintendent
Myer 1890 Bottling Co., New York City

1

Shop Built Tools

Cut Maintenance Man Hours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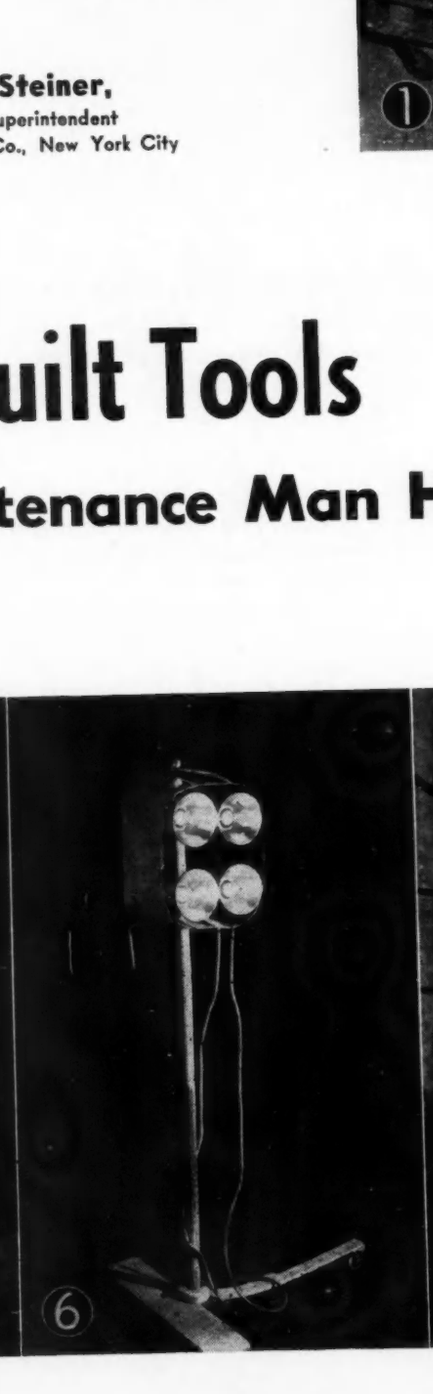
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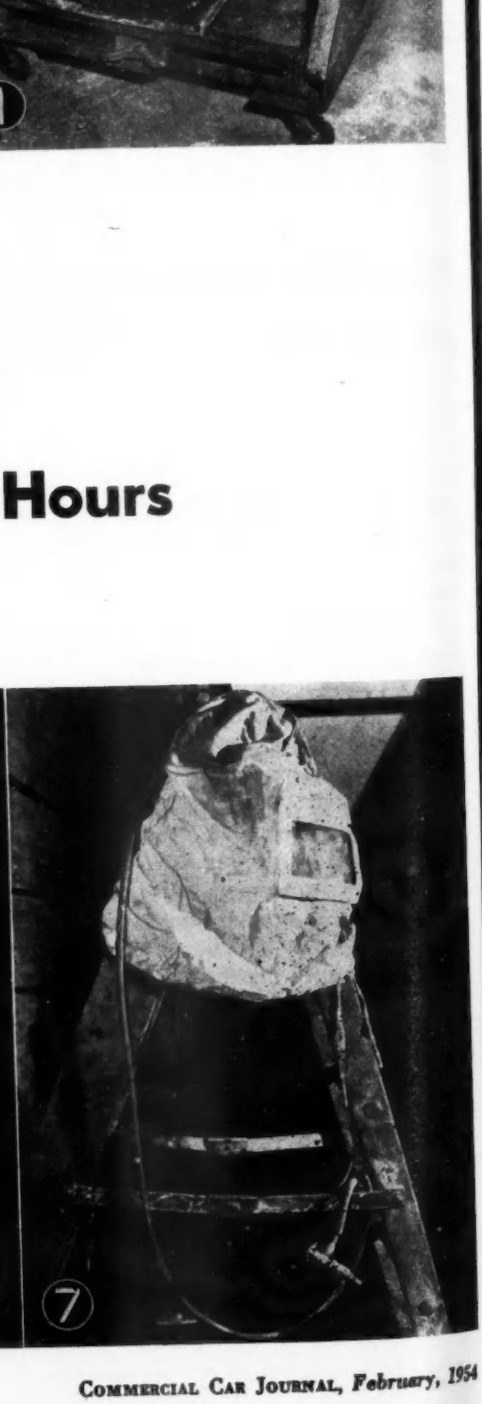
7

THROUGH periodical visits to the scrap yard, plus careful salvage of parts that might otherwise be discarded from our fleet of 49 trucks and cars, we are able to rig up many shop tools that ordinarily are found only in the bigger shops. In this way two men are now able to handle the same volume of work (with some part-time help and a little work farmed out) that at one time occupied as many as five men.

We put everything but the men's room on wheels as we believe it is just as important to save steps in the small shop as the big one. Now we can perform many operations in any convenient part of the building. It is often easier to jockey the tools around than to move the trucks. We rarely have a rush job tied up because a department is loaded.

Engine Stand

OUR engine stand (1) is a case in point. Mounted on four heavy ball-bearing castors, it can be rolled by one man to any part of the shop, for machining, drilling, cleaning, painting, etc. The engine can be turned in any desired position, with the exception of changing its height from the floor.

The framework is of 3 by ¼-in. channel iron, bought from the scrap yard for a total of four bucks. The wing nuts once held spare tires on some of our International trucks. The angle disc comes from the center of a Chevrolet truck wheel, drilled with ½-in. holes.

The support arms are drilled with a series of ½-in. holes, on 1½-in. centers, to permit setting the engine in nearly perfect balance. Thus a full 360 deg turn is possible, permitting the engine to be bottom side up for greater accessibility.

A removable tray rests on the bottom framework for engine parts and tools. Also the bottom frame work is slotted and bolted so that the stand can be squeezed to half its width and stored in a corner when not in use.

Lift Removes Engines

WE USE our lift for removing engines from trucks (2). This is particularly convenient with COE models where you generally have only 6-in. clearance. Ours is an air-over-oil twin-post lift that can be delicately controlled to any desired height and angle.

The suspension "beam" is a length of 6-in. structural channel steel with a 3/16-in. web. One end of this beam is bolted under a 3/16-in. angle iron. Part of a dolly running in the frame of the lift, this angle iron has 3-in. ball-bearing wheels at each end. It rolls very easily even under great weight. A heavy chain, 13 in. long and bolted in a loop, suspends the motor from the free end of the beam.

At about its middle the beam rests on an old International axle, which can roll along the lift frames. Since the beam is secured to a movable part at the back, the whole assembly of beam and engine can move horizontally in or out of a truck. Turning the axle by the disc gives us almost micrometric

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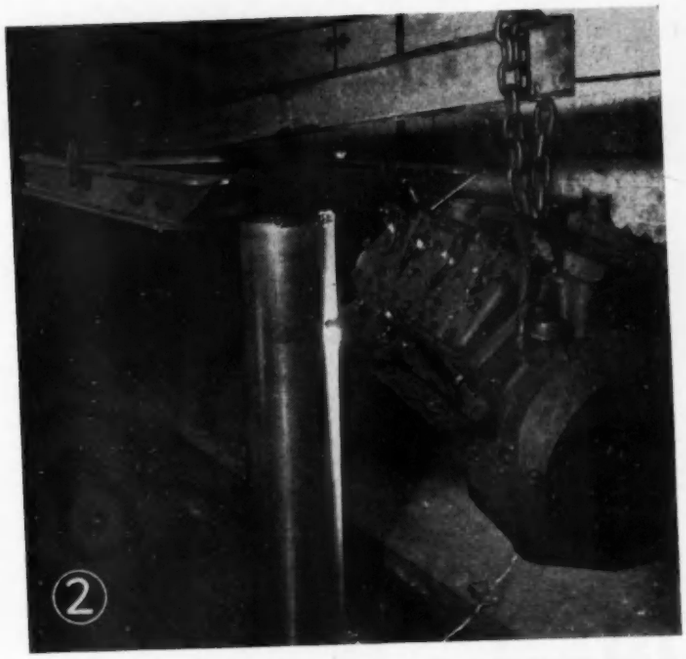

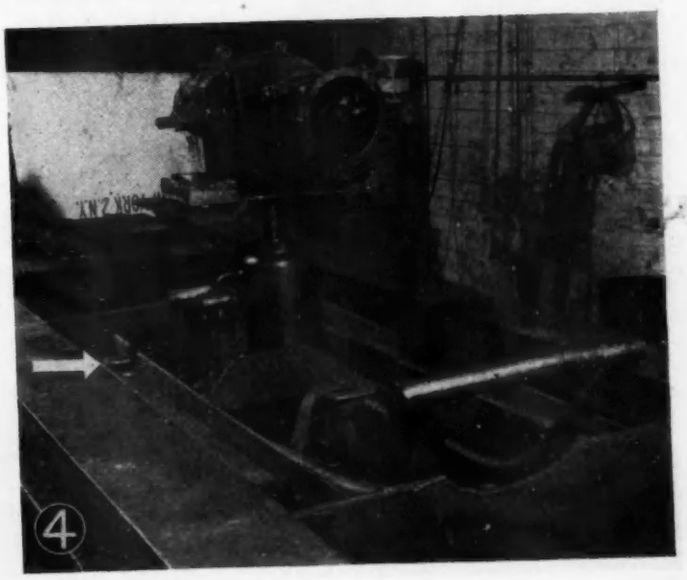

These plastic "doubles" haul 76,800 lb GTW loads of paper and glass over snow covered

By Morris Snyder
General Manager
Seaboard Transportation Co.

Fleet Built Plastic Bodies

Can Take It

A TEN-MONTH long experiment in the construction and use of glass fiber plastic truck and trailer bodies has proved highly successful in our operation at Antioch, Cal. Seaboard Transportation Co., 28-year-old contract hauler, operates a fleet serving California, Oregon and Washington.

We are truckers, not manufacturers, but we have built six van-type trailers and six open top, wood chip trailers out of glass fiber and Vibrin polyester resin since the first of last April and find them entirely satisfactory for heavy-duty work.

We are the first contract hauler to operate 24-ft doubles in California, using 300 heavy-duty units in "trains" of tractor and two semi-trailer combinations with gross overall weight of 76,800 lb.

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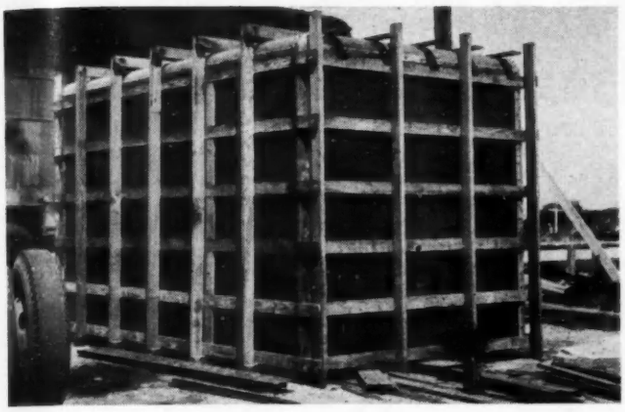
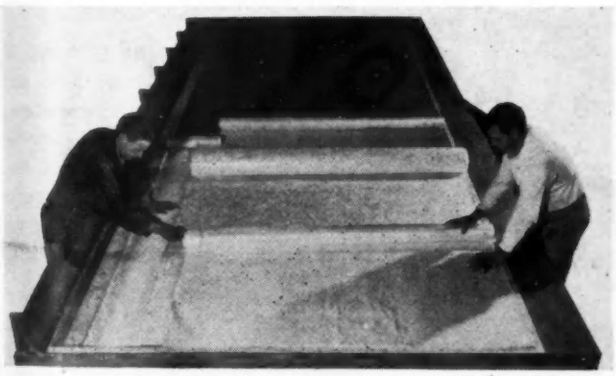
Unpainted plastic trailer is translucent. Seaboard paints trailers to deflect heat, leaves some areas unpainted to admit light

mountains or across the desert

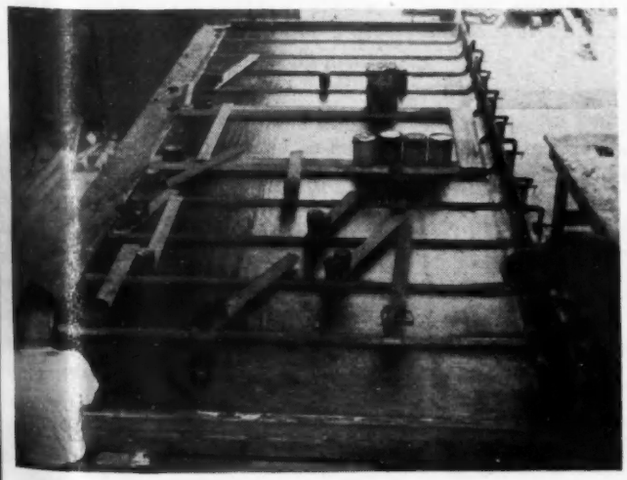


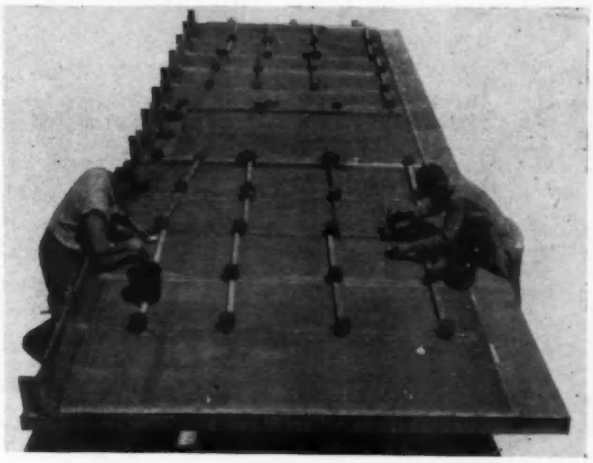
This fiber glass reinforced plastic and masonite mold is for making one-piece plastic bodies for straight trucks



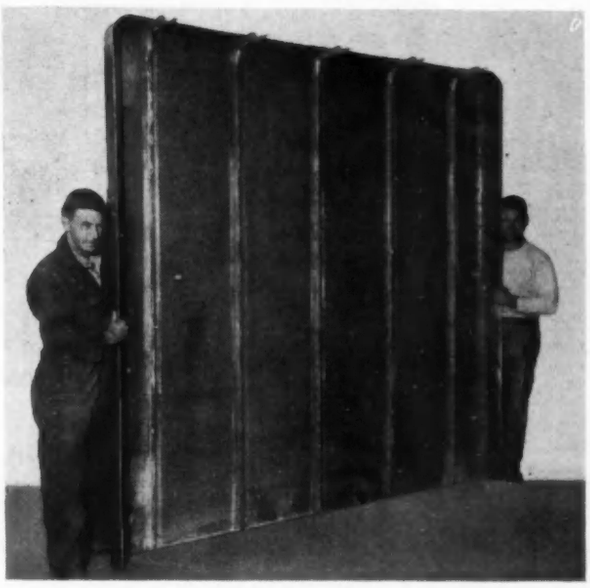
First step in making a one-piece trailer side is spreading or "laying-up" fiber glass cloth and mat in the mold

Resin is then spread over the fiber glass and pre-formed reinforced plastic ribs are pressed into the wet lay-up



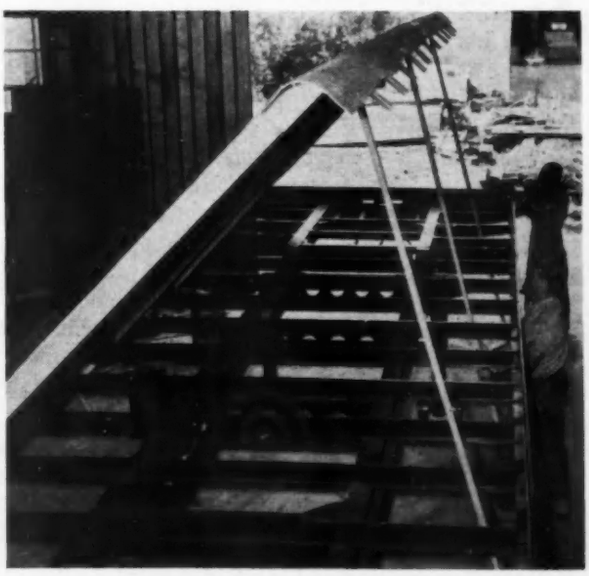


Final check before resin sets. Note plastic door frame. Plastic in door area will become door liner



After resin sets, complete side is lifted from the mold. Front end section, shown here, weighs 97 lb

Assembly of trailer starts with erection of sides on chassis. Roof is also a one-piece plastic unit



Torque Converter

Proves Out in Highway Hauling

United Truck Lines reports on hauling 72,000 lb GCW using a 17-in. torque converter with a 4-speed transmission

WHILE heavy-duty torque converters have long been standard on transit buses and specialized off-highway trucks, it is well known that they have not yet been generally adopted for heavy-duty highway hauling. Biggest objections to date have centered on the triple problem of cost, weight and fuel economy.

Considering this background, COMMERCIAL CAR JOURNAL brings readers a report on an experimental unit now in operation for United Truck Lines in Spokane, Wash. The equipment involved includes a Kenworth tandem drive tractor with 40-ft semi-trailer carrying a GCW of 72,000 lb. It is powered with a Buda Model No. DAS 844 diesel engine of 844 cu in. and a net horsepower in the close vicinity of 240. Directly behind the engine is a 17-in. diameter torque converter with 3 to 1 torque multiplication made by Schneider Mfg. Corp., Muncie, Ind. Behind this is a standard 4-speed transmission.

According to United's maintenance superintendent, George Jackman, the combination of the torque converter and the 4-speed transmission weighs almost the same as the combined weight of the Brown-Lipe Model No. 8045 main and Model No. 8035G auxiliary transmissions which it replaces.

Jackman reports that during the first three months the unit has been in operation over a regularly scheduled run from Spokane, Wash., to Billings, Mont. (which includes both level and mountainous terrain), the unit has been averaging 4.02 miles per gallon compared with an average of 4.56 miles per gallon with the previous transmission setup. Thus, there is a net loss of half mile per gallon. This Jackman hopes to overcome with better operating and driver efficiency.

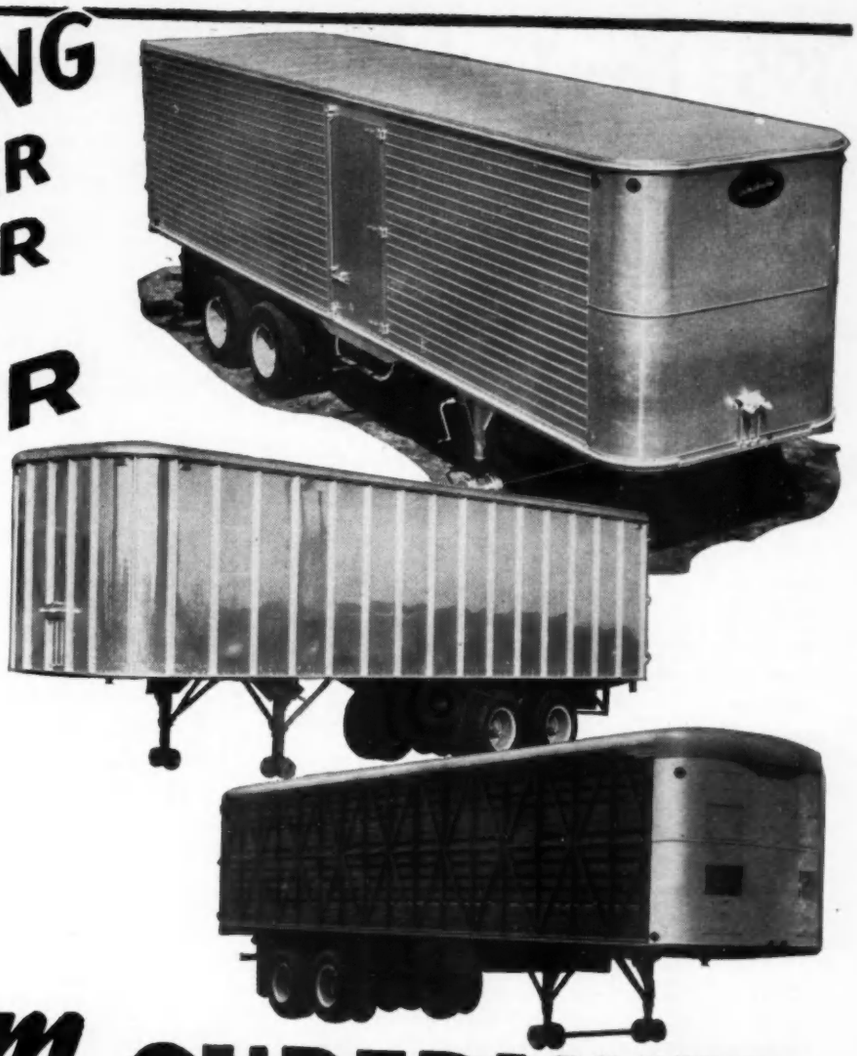
Advantages

MEANWHILE, other items of performance are noteworthy. With the horsepower and gear ratios used in this particular vehicle and with the transmission in direct drive and the torque converter operating, it has been found that engine revolutions pick up almost immediately to 1700 rpm and maintain this as a minimum throughout all power application in converter. This is an ideal engine speed for this particular make and type of engine and completely avoids the danger of "lugging" which can be so harmful to diesel engine operation.

In operation, it has been found that for local driving 3rd and 4th gear in converter are adequate for normal use. However, on the road run to Billings, it has been found that the converter will handle all normal driving problems, including dead stops, without the use of the trans-

(TURN TO PAGE 114, PLEASE)

EVERYTHING YOU'VE EVER HOPED FOR IN A TRAILER IS HERE NOW IN THE NEW



Kingham UNIVERSAL SUPERLINER

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EASY ON THE DRAW

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In Vans, Racks, Reefers and Flats you get a completely engineered unit of absolute minimum weight, . . . yet tough and rugged to withstand severest duty.

Maintenance is a negligible factor due to Kingham's 1½" square steel tubing trussed side walls of diamond design . . . Aluminum or Steel panels . . . One piece "Hardtop" roof . . . 1⅛" oak floors . . . Plywood lining and Kingham's own 3 point Tandem. These and many, many other refinements and improvements make the Kingham SUPERLINER your best buy in Trailers.

See your nearest Kingham dealer today . . . or write.

NATIONAL SALES

Several Desirable Territories still open for distributorships. Write for details.

NATIONAL SERVICE

KINGHAM TRAILER COMPANY, INC. LOUISVILLE 10, KY.

1953 New Truck Registrations by Makes by States*

STATE AND MONTH		Auto-car	Brock-way	Chev-rolet	Dia-mond T	Divco	Dodge	Fed-eral	Ford	FWD	GMC	Inter-na-tional	Ken-worth	Mack	Peter-bilt	Pon-tiac	Reo	Stude-baker	White	Willys	All Others	Total
Alabama	Nov.			364			83		398		144	69		6			4	17	12	6		1,103
	11 Mos.	13	1	7215	24	20	1504	7	4910		1921	1154	1	116			27	374	209	134		17,830
Arizona	Nov.			187	1		52		203		72	47	7	7			6	22	5	11		620
	11 Mos.	2		2343	12	6	576		1736	1	784	616	32	43	3	3	48	226	60	181	2	6,674
Arkansas	Nov.			429	1		93		601		128	77						19	9	21		1,378
	11 Mos.	3		6559	13		1213	4	5434	1	2021	1286		15		2	15	461	106	152		17,285
California	Nov.	4		1708	22	13	467		1778	8	433	327	9	11	7	3	19	98	33	86	20	5,048
	11 Mos.	116	6	23403	268	139	7177	9	16678	73	7056	5355	214	250	217	56	223	1796	551	1707	163	65,457
Colorado	Nov.			292	1	10	61	1	333		73	82		9			4	11	3	50		930
	11 Mos.	30		3556	68	34	770	9	2858	11	1042	1177	14	62	8	3	27	252	54	472	1	10,448
Connecticut	Nov.	11	5	148	11	15	52	1	225		52	60		14			5	22	13	16	3	653
	11 Mos.	42	45	2311	100	87	766	39	1893		641	839	1	148		5	82	246	129	189	9	7,582
Delaware	Nov.	1	1	55			18		61		13	14		7				2	3	1		176
	11 Mos.	10	12	1013	6	5	259	5	658		179	295		29			9	80	17	20		2,597
Dist. of Columbia	Nov.			94		3	43		84		21	19					1	2	3	12		282
	11 Mos.	6	1	869	13	39	427	1	489		280	201		19		2	24	12	18	39	1	2,440
Florida	Nov.	1		640	3	6	175		808		163	176	6	18			16	42	57	76		2,187
	11 Mos.	17		7440	57	58	2030	13	5786		1933	1759	7	343		3	118	785	378	784	14	21,505
Georgia	Nov.	2		529	3		139		813		115	128		16			2	26	16	7		1,798
	11 Mos.	13	6	8515	54	13	1887		6424		2103	1799		115		7	41	676	216	150	2	22,021
Idaho	Nov.			130	1		48		163		42	52	1	1				7	1	15	1	462
	11 Mos.			2095	19	2	637	2	1704	2	897	943	53	56	10	2	15	223	28	393	9	7,092
Illinois	Nov.			929	20	14	219	1	1041		147	310		8			6	54	11	31		2,791
	11 Mos.	24		14105	392	102	3871	7	10686	7	2888	5381	3	153		15	126	1011	547	504	77	39,899
Indiana	Nov.	1	1	1086	14	19	196		1213		185	351		3			10	66	89	36	2	3,272
	11 Mos.	20	1	9322	97	131	2305	22	7258	3	2012	3582	2	116		10	112	1023	619	338	25	26,998
Iowa	Nov.			550	1	4	107		645	2	76	180		4			2	36	27	6		1,640
	11 Mos.	4		6356	68	41	1247	2	5696	9	1059	2848	5	47		10	43	421	179	186	17	18,238
Kansas	Nov.			537	2	3	59		678		131	129						31	8	17		1,595
	11 Mos.	2		6589	35	19	1028		4849	1	1644	2111		11		6	13	408	116	229	2	17,063
Kentucky	Nov.			444	3	2	90		636		112	113		8				25	7	22		1,462
	11 Mos.	2		6477	34	23	1188	17	4986	2	1577	1524		44		12	71	445	110	388		16,890
Louisiana	Nov.			486	4		92	1	617		114	144		2			1	22	5	18		1,506
	11 Mos.	9		7162	37	19	1373	2	5688		1786	1680		48		5	11	542	101	212	1	18,676
Maine	Nov.			126	1	1	31		144		26	25		8			1	9	1	24		397
	11 Mos.	9	9	1684	33	11	504	2	1348	1	540	527		93		6	15	187	44	237	7	5,257
Maryland	Nov.		3	312	1	1	222	8	353		78	116		6		1	1	15	29	9		1,155
	11 Mos.	20	65	3515	18	25	1405	32	2730	3	761	1113		148		6	34	212	199	109	3	10,398
Massachusetts	Nov.	8	7	252	8	13	89	3	403		56	112		25		1	21	31	28	24	14	1,095
	11 Mos.	82	82	3452	91	125	1177	17	3047	8	858	1179		269		19	185	401	270	292	28	11,532
Michigan	Nov.	4		711	9	23	213	21	1469		152	141		6		1	17	23	18	25		2,833
	11 Mos.	66	3	13416	152	294	3787	171	12307	3	3022	2237		109		18	269	530	258	411	10	37,061
Minnesota	Nov.			461	4	3	58		556		88	165		5		1	4	13	8	21		1,387
	11 Mos.	1		5995	95	53	1366	15	5284	20	1304	2438	8	68		14	65	472	122	250	12	17,582
Mississippi	Nov.			700			109		721		279	182		2		1	1	44	4	9		2,052
	11 Mos.	2		6583	2		1050		4599	1	2046	1385		24		2	2	417	45	129		16,287
Missouri	Nov.			824	7	1	133	1	885		218	149		18			4	32	23	12		2,307
	11 Mos.	13		10985	64	112	1906	1	7590	3	2875	2452		82		4	55	636	388	250	2	27,418
Montana	Nov.			183	1	1	38		257		51	68	5	3				15	6	51		879
	11 Mos.	2		2360	7	5	463	2	2053	2	693	1056	38	28	1	1	14	235	51	459	7	7,477
Nebraska	Nov.			296	6	6	36		477	1	85	136	2	4	1		2	12	12	23	4	1,103
	11 Mos.	11		4185	91	20	611		3658	10	1071	1883	21	44	2	3	17	272	111	321	43	12,374
Nevada	Nov.			29			17		46		25	6		1				1	2	2		129
	11 Mos.			570	1		231		475	1	295	150	1	9			2	111	4	117		1,967
New Hampshire	Nov.			54			13		68		14	13		4			1	5	2	12	1	185
	11 Mos.	3	10	902	6	11	233		680	1	241	260		61		2	25	87	14	158	7	2,701
New Jersey	Nov.	10	32	456	24	17	144	6	745		125	172		48		1	11	27	37	34		1,889
	11 Mos.	110	299	7093	127	144	1814	67	6445	8	1866	1997		399		16	70	441	590	316	9	21,611
New Mexico	Nov.	1		177	2	1	36		154		40	29		6			2	14	8	6		476
	11 Mos.	3		2467	23	2	362	4	1516	5	706	470	14	98		4	16	199	55	129	1	6,074
New York	Nov.	23	39	866	15	11	336	5	1043	3	171	456		51		2	45	36	94	122	11	3,329
	11 Mos.	409	666	13419	284	114	5202	121	10892	18	3343	5194		963		26	433	865	853	1074	106	43,982
North Carolina	Nov.	1		857	10	1	121		790		166	121		14				28	17	17		2,143
	11 Mos.	14		9505	30	46	1866	5	7171	1	2294	2021		263		7	25	683	390	355	12	24,689
North Dakota	Nov.			98			17		143		27	55		1				10		9		360
	11 Mos.	2		1680	4	1	372		1830		447	1168		6			3	141	6	83	3	5,746
Ohio	Nov.	5	1	722	8	21	281	9	1443	1	158	362		21			13	41	101	89		3,276
	11 Mos.	105	17	12541	144	192	4020	91	11630	11	2674	4755		346		23	251	809	992	651	20	39,272
Oklahoma	Nov.			650			77		679	1	134	119		2		2	3	37	27	11		1,742
	11 Mos.	7		7857	7	23	1194	1	5719	22	2197	2009	5	31		7	33	465	213	164	1	19,955
Oregon	Nov.			219	6		54		221		55	63		6				12	5	28	1	670
	11 Mos.	26		3589	82	25	1153	7	3311	8	1452	1535	87	102	53	4	43	261	160	700	10	12,608
Pennsylvania	Nov.	10	100	960	15	22	416	6	1181		248	387		58		8	17	70	89	110	1	3,696
	11 Mos.	184	675	13963	198	170	5057	141	11447	7	3208	5680		667		43	286	943	926	697	33	44,225
Rhode Island	Nov.	3		68	3		18		86		10	32		4				4	7	4		237
	11 Mos.	35	2	739	34	18	267		688	4	144	286		38		2	16	92	57	31	1	2,454
South Carolina	Nov.	1		295	1		38		186		65	39		8				9	6	4		652
	11 Mos.	3		5015	3	5	865		2939		1055	694		58		3		286	88	62	5	11,081
South Dakota	Nov.			114	4		19		139		20	54					3	9	2	16		390
	11 Mos.			1535	32	3	398	2	1343	1	457	987	4	1		4	7	138	20	196	1	5,129
Tennessee	Nov.			539	5		128		736		146	130		4			2	30	6	17		1,743
	11 Mos.	3	6	7439	34	11	1698	21	5688		1866	1765		107		2	34	421	217	195	1	19,908
Texas	Nov.	5		1805	5	1	284	1	2301		434	425	4	10		5	4	81	111	41	3	5,500
	11 Mos.	127		28475	131	35	4637	27	20955	5	5676	5708	37	246		36	106	1659	1070	725	13	69,868
Utah	Nov.			103	2		15		116		37	40	1	6				6		20		346
	11 Mos.	2		1505	30	4	344	3	1253	3	422	519	19	38	8	2	23	83	35	179	3	4,475
Vermont	Nov.			41			16		68		10	39		2				8	2	18		204
	11 Mos.		12	709	9	4	263	3	501	3	287	374		27		2	12	65	12	223	8	2,514
Virginia	Nov.	1	1	639	2	3	116		606		161	128		17		2	1	25	35	46	1	1,784
	11 Mos.	31	10	5926	14	45	1553	5	4462		1456	1372		173		7	70	475	282	304	5	16,190
Washington	Nov.			304			99		377		88	101	5	2			2	14	6	22	4	1,024
	11 Mos.	3		3850	48	22	1404		3285	2	1518	1652	152	125	21	6	45	256	172	447	25	13,033
West Virginia	Nov.	2		246		1	79		296		72	57		2				12	6	37	2	812
	11 Mos.	8		3046	8	25	968	6	2570		850	776		102		14	16	178	76	410	4	9,057
Wisconsin	Nov.	1		573	6	14	88		657	4	107	225		6			7	27	23	28	3	1,769
	11 Mos.	14		5878	55	75	1502	12	4815	68	1389	2471	1	74		15	106	420	171	354	34	17,454
Wyoming	Nov.	1		107			17		112		33	34		1				5	3	26		339
	11 Mos.	1		1359	4		254		1070	2	489	557	3	17	1	3		84	19	307		4,170
Total	November, 1953	96	190	22393	232	230	5332	64	27753	20	5400	6459	40	465	8	28	238	1209	1020	1348	71	72,399
Total	November, 1952	147	185	25610	256	170	7972	50	16008	62	9809	7067	56	493	18	75	330	2295	925	1834	115	70,477
Total	11 Months, 1953	1609	1928	306567	3158	2358	76186	895	241014	331	77325	89120	720	6432	324	442	3263	21505	11346	16393	737	861,053
Total	11 Months, 1952	1455	1575	246574	3193	2586	94445	760	162533	505	73098	88493	665	6667	226	500	3140	26791	10456	18279	2255	742,196

* Data from R. L. Polk & Co.

Free PUBLICATIONS

FOR YOUR CONVENIENCE USE THE POSTCARD ON NEXT PAGE

LI. Winter Driving Data

Does temperature affect a truck's stopping ability on ice? Yes—and that answer comes with authoritative emphasis from a group of engineers and automotive experts who braved chill winds on a frozen Wisconsin lake to find the answers for the National Safety Council's Committee on Winter Driving Hazards.

When the temperature was zero, the average stopping distance on glare ice from 20 mph was 100 ft. But at 32 deg —the melting point—it took 250 ft to stop at the same speed—a difference of 140 ft.

"The driver who starts out on an icy road early in the morning while it's still cold finds traction and stopping ability fairly good," said Ralph A. Moyer, traffic research engineer for the University of California and chairman of the committee. "But as the sun comes out and the temperature rises, he doesn't realize that the ice will become much more treacherous. When he finds he can't stop in time to avoid an accident, it's often too late."

The committee, in a new booklet summarizing its test findings, lists temperature changes as one of the three most important reasons for winter traffic accidents. The others are reduced visibility and inadequate traction.

The booklet, *Safe Winter Driving Facts for Truck Drivers*, describes effective winter driving techniques and the mechanical helps which are available to make winter driving safer driving.

The booklet rates tire chains as the best self-help. Tests proved that chains could cut braking distance in half on either snow or ice and increase pulling traction four to seven times.

Tire chains with cross chains reinforced with projecting teeth or cleats are recommended because of their power to resist side skids as well as provide stop-and-go traction.

Single copies of this handy-size, 21-page booklet are available by circling L1 on the postcard on the next page.

L2. Clutch Chart

Fleet maintenance men will be interested in this new king-size clutch service and specification chart. As a training aid and continual shop reminder, the 3 by 2 ft wall chart describes eight important steps in adjusting shim-type clutches. It is printed in color on durable map stock. Reinforced metal edges and brass ring hangar straps have been added for long life and use.

Five large photographs aid in explaining the discussion of (1) checking dimension "A," (2) blocking the clutch pedal, (3) loosening the adjusting nuts, (4) removing the shims, (5) reblocking clutch pedals, (6) tightening the adjusting nuts, and (7) checking clearance between clutch release sleeve and clutch release bearing.

The chart also lists specifications for 166 different model Lipe heavy duty clutch models, including model number, quantity of shims, dimension "A" and facing thickness measurement.

For a copy of this handy shop training aid and maintenance reminder, circle L2 on the postcard.

L3. Welding Reprint

"Stranded Electrode Materials for Aircomatic Welding" is the title of a new 12-page reprint now available. Reprinted from the *Welding Journal*, this article discusses the use of stranded wires in the inert-gas-shielded metal-arc consumable electrode Aircomatic welding process.

Some of the points covered include: construction of stranded electrodes with close-up photographs showing how the wires are interwoven; welding characteristics of a stranded electrode with photomicrographs of deposits; and case history applications complete with illustrations showing where stranded electrodes have been used with success.

A copy of this booklet may be obtained by circling L3 on the postcard on the following page.

L4. 4-Wheel Drive Facts

Packed with performance data this digest-size, 24-page booklet is an excellent presentation of the case for 4-wheel drive trucks.

The data has been compiled from the proceedings of the 29th Annual Meeting of the Highway Research Board, SAE Quarterly Transactions for Jan. 1952, and parts of a report presently being compiled by University of Wisconsin's Engineering Experiment Station.

Subject covered include stability, control, traction, tire wear, fuel economy, and braking. A full set of charts and diagrams help make the text more clearly understood.

Those who are possible 4-wheel drive users should find it of value to circle L 4 on the postcard on the next page for a copy of this report.

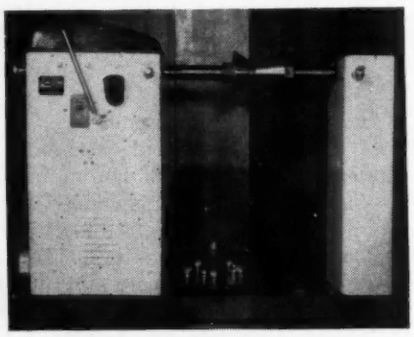
L5. Decimal Card

For the mechanic's toolchest or for pocket-handy reference, a new red and black plastic-faced decimal equivalent card is offered. The handy chart, measuring 3⅜ by 5½ in., lists decimal equivalents of fractional parts of an inch to six places. Circle L5 on the postcard for this decimal equivalent card.

For information on additional literature of interest to fleet operators, see page 136

NEW Products

ADDITIONAL DETAILS AVAILABLE UPON REQUEST VIA POSTCARD



P1. Wheel Balancer

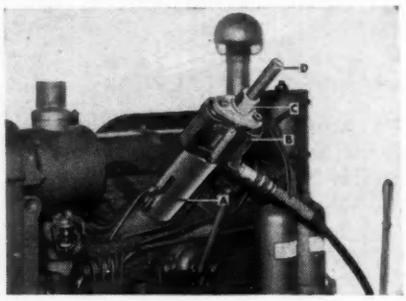
Bear Mfg. Co., Rock Island, Ill., has recently announced their new Model No. 3300 "Special Heavy Duty Balancer" which will balance wheels up to 12.00-24. The machine is designed to tell the operator how much weight to apply and where to apply it. Standard equipment includes cones for front wheels with hubs to handle all trucks of 2½ ton rating and up, as well as backing plate attachments for rear wheels without hubs to handle trucks of 1 ton rating and up.

P2. Body Hoists

Perfection Steel Body Co., Galion, Ohio, now has available a new line of telescopic hoists specifically designed for 12 to 24 ft dump bodies for trailers or tandem trucks. Four models are available. These include single-acting units with either twin 7 or 8-in. cylinders and 80-in. stroke, and single-acting units with 7 or 8-in. cylinders and 54-in. stroke.

P3. Cylinder Sleeves

"Dura-Cast" thin-wall, flanged cylinder sleeves for all Ford engines (3 1/16-in. bore) and Fordson tractors (3 3/16-in. bore) are new additions to the line of sleeves made by Dura-Bond Engine Parts Co., Palo Alto, Cal. Made of centrifugally cast, alloy iron, they are finished on both OD and ID, and come in standard wall thicknesses.

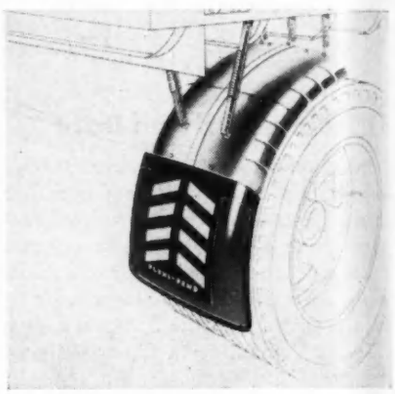


P4. Pre-Cup Puller

An improved design puller for removing the precombustion cup on all International diesel engines has just been announced by the Owatonna Tool Co., Owatonna, Minn. It consists of three sizes of expanding collets which grip the inside diameter of the cup, an expanding screw which tightens the collet in the cup, a puller screw "D," sleeve "A," forcing nut "C" and "Power-Twin" ram "B" when used hydraulically. The tool can be used manually with the nut "C" turned with a wrench.

P5. Cab Heaters

Two new truck cab heater-ventilators for the 1954 line of Diamond T trucks have been developed by the Evans Products Co., Plymouth, Mich. One was designed specifically for the new Diamond T "Tilt Cab." This heater, which can be used either as a combination fresh air and recirculating heater or as a 100 per cent recirculating air heater, has 25,000 BTU output. The heater unit itself is mounted under the instrument panel. A power defroster with 72.2 cfm windshield output is mounted on top of the heater. Two doors, one on the driver's side and the other on the passenger's side of the heater, provide an even flow of heated fresh air. The "Tilt Cab" heater measures 13⅝ by 8¾ by 10 in. and has a special flexible coupling so the heater does not have to be disconnected each time the cab is raised.



P6. Splash Guard

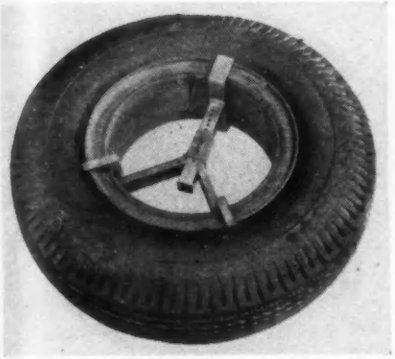
"Flexi-Fend," a new splash shield, has been announced by Flexi-Fend Corp., Washington, D. C. The shields are made of metal with a rubber skirt at the bottom. Each shield is mounted to the truck by three hinge brackets and two spring brackets. This mounting, in addition to insuring non-sailing rigidity, provides a shock absorbing flexibility which eliminates dock damage.

P7. Pedestal Drain

A new pedestal drain designed for the efficient draining of crankcases, transmissions (both regular and automatic), and differentials has been announced by Alemite, a division of Stewart-Warner Corp., Chicago. A detachable bowl with a four-gallon capacity permits the complete draining of automatic transmissions. Attached to the bowl with an adjustable friction lock is a hinged splash plate which permits simultaneous draining of two housings. The bowl fits onto a telescoping stand which can be locked at any desired height up to 72 in. To dispose waste oil, the bowl is lifted from the stand and placed on a drain adapter which permits waste oil to drain into drum or tank. The drum adapter, which screws into a 2 in. p.t. bung of oil drums supports the bowl and opens the bowl outlet valve to drain waste oil.

The latest developments in parts, accessories, equipment and tools for the fleet shop

CIRCLE APPROPRIATE NUMBERS ON POSTCARD FOR MORE INFORMATION



P8. Inflation Guard

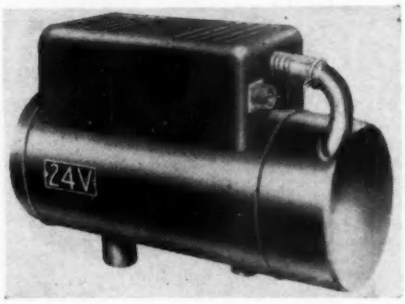
The "Three Star Safety-Flater" has been introduced by Jack P. Hennessy Sales Co., New York City. This is a simple device for protecting the operator when inflating truck tires. Operation consists of placing "Safety-Flator" in the middle of the wheel pressing trigger release and extending ends to cover lock ring. This only takes 5 sec. This gives three point protection and enables owners to meet insurance underwriters' specifications for safety.

P9. Floor Crane

Stratton Equipment Co., Cleveland, Ohio, now reveals news of a one-half ton portable hydraulic floor crane equipped with a safety release valve to automatically stop overloading. It is especially made to handle the loading of freight 1000 lb or under. Specifications of the crane are: (1) over-all height—72 in., (2) over-all width—35 in., (3) over-all length—42 in., (4) length of beam—32 in., (5) beam travel—47 in.

P10. Hand Torch

Introduction of a new LP gas hand model blow torch with disposable fuel tank has been announced by The Turner Brass Works, Sycamore, Ill. It is designed for soldering, light brazing, similar job and shop use where heavy duty equipment is not required.



P11. Engine Heater

A new combustion-type engine coolant heater has been introduced by South Wind Division, Stewart-Warner Corp., Indianapolis, Ind. The new heater, Model No. 939-A, delivers 15,000 BTU/hr to the engine coolant. Six thousand BTU/hr from the heater exhaust is available for other uses. It is approximately 6 in. in diameter and 15¼ in. long, designed so that it may be mounted either horizontally or vertically, and so it will operate satisfactorily on a moving vehicle. It offers the advantage of maintaining a constant coolant temperature by cycling automatically between high and low heat. Where the heater can be mounted ideally, circulation of coolant is achieved by thermo-syphon action.

P12. Signal Lights

J. W. Speaker Corp., Milwaukee, Wis., has announced the manufacture of a new complete line of directional signal lights for trucks Features of the lamps include light weight, ruggedness, and longer range visibility made possible by the use of concentric, prismatic lucite lenses. The lucite lenses, superior to glass in light transmission, provide more than 12 sq in. of fadeproof, glareproof, non-destructible luminous area. Because of the lens design, the lamps can be mounted at any angle and still give maximum light regardless of lens position in the lamps. No reflectors are necessary.

P13. Diesel Fuel Filter

A new truck size filter to remove 100 per cent of water from diesel and other fuels is being introduced by the Fram Corp., Providence, R. I. It is a combination unit mounted in series, consisting of a fuel filter and water separator unit. Both units use replaceable cartridges. In the initial stage, the fuel filter unit filters out dirt, rust, and other solid contaminants down to 1 micron (.000039 in.) while condensing water in the fuel into large droplets. Then the clean fuel passes through a connecting nipple into the water separator unit. In this second stage, water collects on the outside surface of the separator cartridge, and drops into the sump. Water is easily removed from the filter sump by a drain valve. The new unit can be quickly and easily installed on diesel engines up to 225 hp.

P14. West Coast Mirror

Being presented to the trade by K-D Lamp Co., Cincinnati, Ohio, is its Model No. KD 71 complete assembly, mounted West Coast type mirror. The big, replaceable 6½ by 16¾-in. mirror

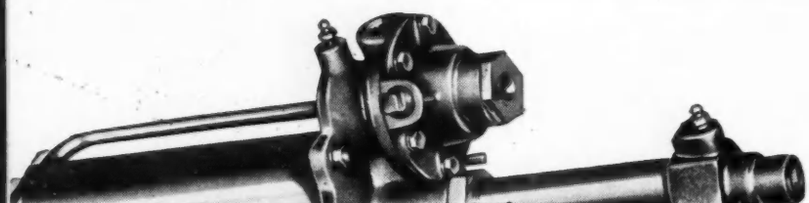
(TURN TO PAGE 162, PLEASE)

Bendix

AIR-PAK

offers the advantages of two braking systems in one unit

...air power plus hydraulic actuation



With Bendix* AIR-PAK you get faster brake action and more positive control, for here in a single, compact easy-to-install power braking unit are combined the well proven advantages of hydraulic brake action with an air brake system.

Bendix AIR-PAK changes air pressure into hydraulic pressure by means of two directly connected pistons. Thus, a non-compressible column of brake fluid instead of air connects between the driver's foot and the brake shoe. If in an emergency situation air pressure fails for any reason, or if braking is required before air pressure builds up, brakes can be applied instantly by foot power alone.

AIR-PAK is the product of Bendix—world's largest producer of power brakes and builder of Hydrovac*, the world's most widely used power brake with *over three million units in use.*

For truck manufacturers or operators interested in AIR-PAK, a descriptive folder is available on request.

*REG. U.S. PAT. OFF.

Bendix Products Division

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Bendix AVIATION CORPORATION

CCJ's Truck Specifications

COMPILED FROM DATA SUPPLIED EACH MONTH BY MANUFACTURERS

KEY TO DEFINITIONS

MAKE AND MODEL

Only Domestic Truck Models are listed.

OPTIONAL UNITS

For the express purpose of best fitting the truck to the individual job most of the models listed can be provided with optional engines, transmissions, axles, etc., and these models when so equipped are considered standard stock models.

CHASSIS LIST PRICE

The chassis list price applies to the minimum standard wheelbase with standard tires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Gross Weights published herewith are those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road conditions, etc., the gross weights that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT

The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List Price.

MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost, if it differs from the standard size. Dual rears are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

GEAR RATIO RANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

TRACTORS

Unless given the designation (N)— meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

KEY TO ABBREVIATIONS

MAKES—ALL

B—Bendix.
BL—Brown-Lipe.
Bu or Bud—Buda.
BW—Bendix-Westinghouse.
C—Chevrolet.
Cl or Cla—Clark.
Con—Continental.
Cum—Cummins-Diesel.
Eat—Eaton.
F—Ford.
Fu—Fuller.
G-H—Goodyear-Hawley type.
H—Hotchkiss.
Her—Hercules.
HS—Hall-Scott.
Int—International Harvester.
L—Lockheed.
LeR—LeRoi.
LH—Lockheed front, Wagner "hi-Tork" rear.
LT—Lockheed type front Timken rear.
LW—Lockheed front, Wisconsin rear.
M—Midland.
N.P.—New Process.
O or Ow—Own.
Op or Opt—Optional.
Shu—Shuler.
Spi—Spicer.
T or Tim — Timken-Detroit Axle Co.
Tw—Timken-Detroit—Westinghouse.
TW—Timken-Detroit—Wisconsin.
Var—Variable.
WG—Warner Gear.
Wau—Waukesha.
W or Wis—Wisconsin.
Wg—Wagner "hi-Tork."
Ws—Westinghouse.
WW—Westinghouse or Wagner

WHEELS DRIVEN

2F—Forward unit of Rear Axle Group.
2R—Rear Unit of Rear Axle Group.
4R—Forward and rear units of Rear Axle Group.
6—All wheels.

BRAKES—SERVICE

Location

4—Four Wheels, front and rear.
4r—Four Wheels, rear only.

Type

I—Internal.
X—External.

Operation

A—Air.
H—Hydraulic.
V—Vacuum.
D or Dp—Dual Primary.

BRAKES—HAND

Location

C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
6—Six wheels.
P—Back of Power Divider.
J—Jackshaft.
T—Transmission.
F—Driveshaft.

Type

D—Tru-Stop disk.
I—Internal.
M—Mechanical.
X—External.
PD—Two drums on rear of power divider.
F—Mechanical, foot operated

BRAKE DRUMS

Material

a—Cast alloy iron.
A—American Car Foundry.
c—Cast iron.
Cc—Composite Front, Cast Iron in rear.
Ce—Centrifuse.
Cl—Copper iron.
Co—Composite.
D—Dayton.
E—Ermalite.
G—Gunite.
N—Nickel iron.
S—Steel.

(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

FRAME

Type

C—Channel.
T—Channel tapered front and rear.
L—Channel reinforced with liner.
B—Channel reinforced with both liner and fishplate.
P—Channel reinforced with plate.
TL—Channel tapered front and rear reinforced with liner.
D—Drop Center.
Tf—Tapered front.
A—Straight section sidemembers, lined with oak inserts.
Z—Reinforced (X) member frame, box type sections.
BG—Box girder.

REAR AXLE

Final Drive and Type

B—Bevel.
CD—Chain Drive.
F—Full-floating.
H or Hy—Hyphoid.
d—Dual range axle.
2—Double Reduction.
S—Spiral bevel
W—Worm.
¾—Three Quarters Floating.
½—Semi-Floating.
T—Torque Tube.

GEAR RATIOS

(**) Only one ratio.

Drive and Torque

H—Hotchkiss (springs).
R—Radius Rods.
L—Parallel Torque Rods.
T—Torque Arm.

GOVERNOR STANDARD

Y—Yes.
N—No.

KEY TO REFERENCES

c.f.—Cab Forward design.
c.o.e.—Cab-Over-Engine design.
(D)—Diesel-engine equipped.
(T)—Designed for tractor use only.
(C)—Ford or Chevrolet Models.
(R)—Remanufactured Fords.
▲—Denotes "Includes Cab" when used with weights or prices.

BROWN

**—All six engines listed are available on all five models of trucks.
*—Steel frame only. Also available with Aluminum frame 10x3½x½.
†—Many variations available with Fuller or Spicer transmissions.

CHEVROLET

†—6500 lb. G.V.W. when 6.50/16 dual tires are used on rear.
▼—Includes spare tire, full fuel tank and cooling system.
▲—7.50/20 can be used on the front with no decrease in G.V.W. when 8.25/20 are used on dual rear wheels.
::—Own Loadmaster engine available at extra cost.
‡—8.25/20 front tires are required when 9.00/20 dual rears are used.
††—Diameter: (Average) Front, 2.6858; Front Center, 2.7168; Rear Center, 2.7478; Rear, 2.7788. Total Length 5⅛.
†—Hydramatic optional.
§—Heavy duty 3 speed transmission optional.
††—Also available in 5.14 ratio.
□—5.43 available.
□□—Two speed axle available.
*—8⅞x2⅛x¼ is used with heavy-duty equipment.
▼—Powerglide optional.
●—Blue Flame 125 engine optional.
**—Jobmaster 261 engine optional.

CORBITT

—Available with optional tires and axles for less G.V.W. rating.
‡‡—Also available with Cummins HRBB600 and NHB-600.

DODGE

▲—Front only; Rear 7.00/168.
*—Front only; Rear 8.25/168.
¶—Front only; Rear 7.50/20.
‡—Front only; Rear 9.00/20.
†—Front only; Rear 10.00/20.
■—Front only; rear 8.25/20.
●—Twin carburetion.

DUPLEX

‡—Torque Divider, Timken T70-2 speed.

FEDERAL

*—Diesel engine obtainable.
†—Five speed transmission obtainable.
‡—Auxiliary transmission Spicer 6231B with 3 forward speeds.
§—Auxiliary transmission Spicer 8031.
‡—5501, 6001 and 6501 have single speed, double reduction rear axle.
::—Radius rods obtainable.
‡:—For wheelbases below 196" —9 x 3 x ¼.
‡:—Diesel engine obtainable.
‡‡—Overdrive optional.
▲—Torque Divider Timken T70-2 speed, T50 obtainable.
†—SW3020, SD3020 obtainable.
†—SW3020 obtainable.
▲—Rear only.
▼—With R series rear axle, reduce G.V.W. by 4000 lbs.

FORD

■—Front only; rear, 8.25/188.
†—Effective length.
□—Reinforcement standard on 192" w.b.
△—8¼x2¼x¼ standard on 154" w.b.
*—17000 for 210" w.b.
●—Rear only.

FWD

*—Four wheel steering.

KENWORTH

††—Timken T13129 PA Trailing Axle.
†—14.00/24, front; 16.00/24, rear.
●—C.O.E. optional.
*—One man cab.
▲—Torque converter plus Torquematic transmission optional.

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OSHKOSH

▲—Includes cab.
■—1091 cu. in.
°°—Hydraulic coupling optional.
△—Dependent upon engine.

REO

§—Model 331-OA and 331-OA LPG engines can be furnished.
‡—Two speed axle available.
△—Double reduction and 2 speed available.
*—Buda 6DT8-468 diesel engine available.
‡—Model 255-OA-LPG engine can be furnished.
†—Front only; rear, 10.00/20.
‡—OH-160 engine can be furnished.

STERLING

†—Rear only; Front 11.00/24.
‡—Rear only; Front 11.00/22.
§—Own FJ three speed auxiliary transmission furnished.
§—Timken T70 two speed torque divider furnished.
‡—Parking brake at rear of auxiliary transmission.
▼—Rear only; Front 12.00/24.
■—Rear only; Front 14.00/24.
*—Rear only; Front 16.00/24.
●—1125 cu. in.
††—Own model FJ three speed auxiliary transmission furnished.
‡:—Timken T76 two speed transfer case furnished.
‡‡—Timken T77 two speed transfer case furnished.
‡—Parking brake at rear of transfer case.
‡‡—Tapered, 9 x 7 x 3¼ x ¼.
§§—Also available with Cummins Diesel engine and appropriate transmission.

STUDEBAKER

§—Two speed 5.93-8.10 and H.D. 6.20 or 6.80 optional.
§§—Two speed 5.93-8.10 optional.

TRUCKSTELL

*—Single front, dual rear.
§§—With 3 speed power divider.
§—Weight with cab and maximum tires.
▼—Including slip-over reinforcing frame channels.
†—Air brake optional.

WARD LA FRANCE

‡—Available with optional rear axles.
▲▲—Available with 11.00/22 or 12.00/20 tires for G.V.W. of 60,000 lbs and optional front and rear axles.
‡‡—Auxiliary transmission Fuller 5A65, 3B65, 3A92 and 3B92.

WILLYS

*—Complete vehicle-Pick-up Type body.
‡—Three speed transmission, 2 speed transfer case.
†—Or Spicer 53-2 at discretion of manufacturer only.

(Continued from Page 93)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE	TIRE SIZES	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	ENGINE DETAILS								TRANS-MISSION		REAR AXLE			FRONT AXLE	BRAKES					FRAME	
							Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Number Diameter and Length Main Bearings	Governor Standard	Make and Model	Forward Speeds	Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	Make and Model	Make Location Type Operation	SERVICE Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	Side Rail Dimensions	Type
			Minimum Standard Maximum	Standard Dual rear S-single rear Maximum Authorized Tire Size (Duals un-less noted)																								
1	Available																											
2	(c.o.e.)	200			15000	5500	Wau BM	6-3¼x4¼	263.5	9	173	78–2800	7–2⅝x10¼	N	WG T9	4	WG T97	H	** –6	20	Tim 32502H	I.4IHV	314	534a	TX		10x3⅜x⅝	T
3	(c.o.e.)	225			16500	6200	Wau BZ	6-4x4	320	5.9	235	105–3200	7–2⅝x10¼	N	Fu 5A330	4	Fu 5A330	H	** –6	20	Tim 32502H	I.4IHV	314	534a	TX		10x3⅜x⅝	T
4	(c.o.e.)	250			20000	6400	Wau BZ	6-4x4	320	5.9	235	105–3200	7–2⅝x10¼	N	Fu 5A330	5	Fu 5A330	H	** –6	80	Tim 32502H	I.4IHV	344	584a	TX		10x3⅜x⅝	T
5	(c.o.e.)	400			22000	6800	Wau BZ	6-4x4	320	5.9	235	105–3200	7–2⅝x10¼	N	Fu 5A330	5	Tim L100PH	R	** –6	83	Tim 35000H	I.4IHV	370	642a	TX		12x3⅜x⅝	T
6	(c.o.e.)	500			23000	7500	Wau MZA	6-4¼x4¼	404	5.6	285	130–3000	7–2⅝x12½	Y	Fu 5F430	5	Tim L100DPH	HF	** –7	80	Tim 26452H	I.4IHV	458	846a	TX		12x3⅜x⅝	T
7	(c.o.e.)	550			28000	8100	Wau MZA	6-4¼x4¼	404	5.6	285	130–3000	7–2⅝x12½	Y	Fu 5F430	5	Tim Q100PH	HF	** –7	84	Tim 26452H	I.4IHV	576	1054a	FD		14x3⅜x⅝	T
8	(c.o.e.)	650 X			23000	10000	Wau MZA	6-4¼x4¼	404	5.6	285	130–3000	7–2⅝x12½	Y	Fu 5F430	5	Tim S2001PH	2F	R	** –7	84	Tim 26452H	I.4IHV	576	1054a	FD		14x3⅜x⅝	T
9	(c.o.e.)	600			28000	10000	Wau 140 GK	6-4½x5	425	6	325	172–2600	7–3¼x13¼	Y	Fu 5A650	5	Tim R100P	HF	R	** –7	40	Tim 26452TW	I.4IAA	566	950a	FD		14x3⅜x⅝	T
10	(D) (c.o.e.)	601			29000	10000	Wau 140 GK	6-4½x5	425	6	325	172–2600	7–3¼x13¼	Y	Spl 7851	4	Tim R100P	HF	R	** –7	40	Tim 26452TW	I.4IAA	566	950a	FD		14x3⅜x⅝	T
11	(c.o.e.)	602			29000	12000	Wau 140 GK	6-4½x5	425	6	325	172–2600	7–3¼x13¼	Y	Spl 7851	4	Tim R100P	HF	R	** –7	40	Tim 26452TW	I.4IAA	566	950a	FD		14x3⅜x⅝	T
12							Cum HB600	6-4½x5½	672	17	500	150–1800	7–4½x16½	Y	Spl 7851	5	Tim H700PH	SF	H	** –7	2	Tim 35000EHX	LH4IH	514	744G	T		9x3⅜x⅝	C
13																	Tim H110PH	HFd	H	** –6	4	Tim 35000EHX	LH4IH	514	744G	T	60	9x3⅜x⅝	C
14																	Tim R200	HFd	H	** –6	4	Tim 35141PX	T4A			G		9x3⅜x⅝	C
15	Brown	**																	H	6.41–8.37		Tim 36000TW	T4A			T	81	10x3⅜x⅝	C
16																												
17		KT	144	166	37000		Con R6572	6-4⅜x5⅝	572.5	9	440	172–2600	7–3¼x14½	Y	Fu 5C720†		Own		H	6.16–5.28	†	TI FE900 DPA	W44IA			a	2M	9¼x3⅜x⅝	TTF
18		KP	144	166	37000		Cum HB600	6-5½x6	672	17	500	150–1800	7–4½x16½	Y	Fu 5C720†		Own		H	6.16–5.28	†	TI FE900 DPA	W44IA			a	2M	9¼x3⅜x⅝	TTF
19	(c.o.e.)	LT	144	166	37000		Cum HB600	6-5½x6	743	15	530	165–1800		Y	Spl 8055†		Own		H	6.16–5.28	†	TI FE900 DPA	W44IA			a	2M	9¼x3⅜x⅝	TTF
20	(c.o.e.)	LP	140	140	37000		Cum HB600	6-5½x6	743	15	575	200–2100		Y	Spl 8055†		Own		H	6.16–5.28	†	TI FE900 DPA	W44IA			a	2M	9¼x3⅜x⅝	TTF
21	(c.o.e.)	LS	118	140	37000		Cum HB600	6-5½x6	743	15	500	175–2000		Y	Spl 8055†		Own		H	6.16–5.28	†	TI FE900 DPA	W44IA			a	2M	9¼x3⅜x⅝	TTF
22							Bu 6DC844	6-5¼x6½	844		640	210–2400		Y	Spl 8055†		Own		H	6.16–5.28	†	TI FE900 DPA	W44IA			a	2M	9¼x3⅜x⅝	TTF
23	Chevrolet																											
24	Trucks																											
25	Bdg. Divy.	D54	115	144	4100	▼33256.70/158	Con R6572	6-4⅜x5⅝	572.5	9.44	0	172–2600	7–3¼x14½	Y	Fu 5C720†		Own		H	6.16–5.28	†	TI FE900 DPA	W44IA			a	2M	9¼x3⅜x⅝	TTF
26		K54	115	144	4800	▼25660.00/168	Cum HB600	6-5½x6	672	17	500	150–1800	7–4½x16½	Y	Fu 5C720†		Own		H	6.16–5.28	†	TI FE900 DPA	W44IA			a	2M	9¼x3⅜x⅝	TTF
27		J54	144	166	37000		Cum HB600	6-5½x6	743	15	530	165–1800		Y	Spl 8055†		Own		H	6.16–5.28	†	TI FE900 DPA	W44IA			a	2M	9¼x3⅜x⅝	TTF
28	(c.o.e.)	LT	144	166	37000		Cum HB600	6-5½x6	743	15	575	200–2100		Y	Spl 8055†		Own		H	6.16–5.28	†	TI FE900 DPA	W44IA			a	2M	9¼x3⅜x⅝	TTF
29	(c.o.e.)	LP	140	140	37000		Cum HB600	6-5½x6	743	15	500	175–2000		Y	Spl 8055†		Own		H	6.16–5.28	†	TI FE900 DPA	W44IA			a	2M	9¼x3⅜x⅝	TTF
30	(c.o.e.)	LS	118	140	37000		Bu 6DC844	6-5¼x6½	844		640	210–2400		Y	Spl 8055†		Own		H	6.16–5.28	†	TI FE900 DPA	W44IA			a	2M	9¼x3⅜x⅝	TTF
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44	Corbitt.	G101B■	137		22000		Con M6330	6-4¼x4½	330.6	1	248	101–2800	7–3½x12	Y	Cla 205V		Own-ND		Y			Own-ND							
45		G302B■	155		28000		Con R6471	6-4¼x4½	471	9	320	129–2600	7–3½x13½	Y	Fu 5A43		NP-89905		Y			NP-89905							
46		G603B34	155		34000		Con R6602	6-4¼x4½	602	9	464	200–2600	7–3½x13½	Y	Fu 5A65		NP-89970		Y			NP-89970							
47		G101T20	137		20000		Con M6330	6-4¼x4½	330.6	1	248	104–2800	7–3½x12½	Y	Cla 205V		NP-90820		Y			NP-90820							
48	(T)	G302T22	137		22000		Con B6427	6-4¼x4⅜	427.5	9	325	127–2600	7–3½x13¼	Y	Fu 5A43		NP-88490		Y			NP-88490							
49	(T)	G402T25	145		25000		Con T6427	6-4¼x4⅜	427.6	9	336	151–2600	7–3½x13¼	Y	Fu 5A43		NP-88500		Y			NP-88500							
50	(T)	G602T27	147		23000		Con R6572	6-4¼x4½	572.5	9	440	189–2600	7–3½x14½	Y	Spl 6253		NP-89960		Y			NP-89960							
51	(T) (D)	D202T20	137		20000		Her DJXH	6-3¾x4½	298.15		233	99–2600	7–3⅛10¼	Y	Cla 205VO		NP-90360		Y			NP-90360							
52	(T) (D)	D401T23	145		23000		Her DWXD	6-4¼x5	426.15		336	142–2600	7–3½x11½	Y	Fu 5A430		NP-90360		Y			NP-90360							
53	(T) (D)	D402T25	145		25000		Her DWXLD	6-4¼x5	426.15		336	142–2600	7–3½x11½	Y	Fu 5A430		NP-90360		Y			NP-90360							
54	(T) (D)	D404T26	145		25000		Cum JB8600	6-4¼x5¼	404	15	404	135–2600	7–3½x11½	Y	Fu 5A430		NP-90360		Y			NP-90360							
55	(T) (D)	D401T27	150		27000		Her DRXC	6-4¼x5¼	329.15		400	147–2200	7–3½x13¼	Y	Spl 6253		NP-90360		Y			NP-90360							
56	(T) (D)	D802T29†‡	156		29000		Cum HB8600	6-5½x6	743	17	640	165–1800	7–4½x16½	Y	Fu 6C720		NP-90360		Y			NP-90360							
57	(T) (D)	D802T30†‡	162		28000		Cum HRB600	6-5½x6	743	17	640	165–1800	7–4½x16½	Y	Fu 10A1120		NP-90360		Y			NP-90360							
58																												
59	Dodge	C-1-B6	108	116	4900	1970	6.00/168	Own T-334	6-3¼x4⅜	218.7	1	177	100–3600	4–2⅛x4	8	Own-ND		Own-ND		N			Own-ND							
60		C-1-C6	116	116	5800	2450	7.00/158	Own T-336	6-3¼x4⅜	218.7	1	177	100–3600	4–2⅛x4	8	NP-89905		3Own T-334		N			3Own T-334					264	Ce	TX
61		C-1-D6	116	126	8000	2776	6.00/16Sa	Own T-338	6-3¼x4⅜	220.7	2	194	110–3600	4–2⅛x4	8	NP-89970		3Own T-336		N			3Own T-336					277	Co	TX
62	(e.t.)	C-1-D6	116	126	8000	2776	6.00/16Sa	Own T-338	6-3¼x4⅜	220.7	2	194	110–3600	4–2⅛x4	8	NP-89970		3Own T-338		N			3Own T-338					277	Co	TX
63		C-1-D6	116	126	8000	2580	7.00/168	Own T-362	6-3¼x4⅜	220.7	2	194	110–3600	4–2⅛x4	8	NP-90820		3Own T-362		N			3Own T-362					316	Co	TX
64		C-1-DU6	102	117	7900	2816	5.50/168	Own T-164	6-3¼x4⅜	220.7	2	191	103–3600	4–2⅛x4	8	NP-88490		3Own T-164		N			3Own T-164					316	Co	TX
65		C-1-EU6	142	142	10100	3270	7.50/168*	Own T-165	6-3¼x4⅜	220.7	2	191	103–3600	4–2⅛x4	8	NP-88500		4Own T-165		N			4Own T-165					355	Co	TX
66	(e.t.)	C-1-F6	108	129	14000	3606	6.50/208	Own T-342	6-3¾x4⅝	230.7	3	194	110–3600	4–2⅛x4	8	NP-89960		4Own T-342		N			4Own T-342					480	Cc	TX
67		C-1-F6	108	129	14000	3606	6.50/208	Own T-364	6-3¾x4⅝	230.7	3	194	110–3600	4–2⅛x4	8	NP-90360		4Own T-364		N			4Own T-364					480	Cc	TX
68		C-1-G6	129	171	14500	4076	6.50/208	Own TX-342	6-3¾x4⅝	251.7	2	210	120–3600	4–2⅝x5	1	NP-90360		4Own TX-342		N			4Own TX-342					480	Cc	TX
69		C-1-GA6	129	171	14500	4206	6.50/208	8.25/20	6-3¾x4⅝	251.7	2	210	120–3600	4–2⅝x5	1	NP-90360		Eat A4-1350		N			Eat A4-1350					480	Cc	TX
70		C-1-G8	129	171	14500	4126	6.50/208	8.25/20	6-3¾x4⅝	251.7	2	210	120–3600	4–2⅝x5	1	NP-90360		4Own TX-312		N			4Own TX-312					480	Cc	TX
71		C-1-H6	129	193	16000	4527	6.50/208	8.25/20	6-3¾x4⅝	251.7	2	210	120–3600	4–2⅝x5	1	NP-90360		4Eat A5-1350		N			4Eat A5-1350					480	Cc	TX
72		C-1-H8	129	193	16000	4803	6.50/208	8.25/20	6-3¾x4⅝	251.7	2	210	120–3600	4–2⅝x5	1	NP-90360		4Own T-344		N			4Own T-344					480	Cc	TX
73		C-1-HA6	129	193	16000	4527	6.50/208	8.25/20	6-3¾x4⅝	251.7	2	210	120–3600	4–2⅝x5	1	NP-90360		4Eat A5-1350		N			4Eat A5-1350					480	Cc	TX
74		C-1-HM6	129	193	16000	4803	6.50/208	8.25/20	6-3¾x4⅝	251.7	2	210	120–3600	4–2⅝x5	1	NP-90360		4Own T-356		N			4Own T-356					480	Cc	TX
75		C-1-H8	129	193	16250	4807	6.50/208	8.25/20	6-3¾x4⅝	251.7	2	205	112–3600	4–2⅝x5	1	NP-89980		4Own T-344		N			4Own T-344					480	Cc	TX
76		C-1-HA8	129	193	16250	4827	6.50/208	8.25/20	6-3¾x4⅝	251.7	2	205	112–3600	4–2⅝x5	1	NP-89980		4Eat A5-1350		N			4Eat A5-1350					480	Cc	TX
77		C-1-H8	129	193	16000	4557	6.50/208	8.25/20	6-3¾x4⅝	251.7	2	210	133–3500	5–2⅝x4	8	NP-90360		4Own VT-344		N			4Own VT-344					480	Cc	TX
78		C-1-J6	129	171	17500	4825	7.50/208	9.00/20	6-3¾x4	265.7	0	225	123–3000	4–2⅝x5	1	NP-90360		5Own T-346		N			5Own T-346					480	Cc	TX

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For Key to References and Abbreviations See Page 93

"Heavy loads and inexperienced drivers played havoc with these engines"

A large Pennsylvania hauler of building material, employing 24 heavy duty gasoline trucks, was faced with excessive maintenance costs. Cylinder, piston and bearing wear was abnormally high—sludge and lacquer deposits were an ever-present problem. On one of his solicitation visits, Sinclair Lubrication Engineer, Harry Donovan was asked for his recommendations.

Mr. Donovan reports, "Observation of driving habits and examination of torn-down engines revealed the crux of the problem was *heavy loads* coupled with inexperienced drivers who were unnecessarily *lugging* the vehicles."

Mr. Donovan continues, "Conditions definitely called for an oil with high detergency and high film strength. I recommended Sinclair SUPER TENOL®. A trial period proved this oil not only provided optimum protection but a *marked decrease was noted in oil consumption.* Later examination showed engines were finally clean—free of sludge and lacquer deposits. This company now uses Sinclair SUPER TENOL exclusively."

SINCLAIR LUBRICANTS

Why not give a Sinclair Lubrication Engineer the chance to help solve *your* lubrication problem. *There's no obligation.* Contact your local Sinclair office or write Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

(Continued from Page 94)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders. Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number Diameter and Length	Governor Standard	TRANSMISSION Make and Model	Forward Speeds	REAR AXLE Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operation	Linings Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME Side Rail Dimensions	FRAME Type
	Dodge—Cont'd																														
1	C-1-JA6	▲2400	129	171	17500	4725	7.50/20D	9.00/20	Own T-346	6–3 7/16 x4.8	265	7.0	225	123–3600	4–2 1/2–5.1	Y	NP-90680	5	Eat A5-1350	SFd	H	5.83–8.81	Own T-346	O4IHV	432	604	c	TX	60	3/4 x2 11/16 x8 1/2	C
2	C-1-JM6	2406	108	162	17750	4775	7.50/20D	9.00/20	Own T-358	6–3 7/16 x4.8	265	7.0	216	114–3600	4–2 1/2–5.1	Y	NP-90720	5	Own T-358	HyF	H	6.29–6.83	Own T-358	O4IHV	432	604	c	TX	60	3/4 x2 11/16 x8 1/2	C
3	C-1-JMA6	2620	108	162	17750	4875	7.50/20D	9.00/20	Own T-358	6–3 7/16 x4.8	265	7.0	216	114–3600	4–2 1/2–5.1	Y	NP-90720	5	Eat A5-1350	SFd	H	5.83–8.81	Own T-358	O4IHV	432	604	c	TX	60	3/4 x2 11/16 x8 1/2	C
4	C-1-J8	▲2298	129	171	17500	4675	7.50/20D	9.00/20	Own VT-346	8–3 1/16 x3 1/4	241	7.5	220	133–3800	5–2 3/8–4.8	Y	NP-90680	5	Own VT-346	HyF	H	6.29–6.83	Own VT-346	O4IHV	432	604	c	TX	60	3/4 x2 11/16 x8 1/2	C
5	C-1-JA8	▲2512	129	171	17500	4775	7.50/20D	9.00/20	Own VT-346	8–3 1/16 x3 1/4	241	7.5	220	133–3800	5–2 3/8–4.8	Y	NP-90680	5	Eat A5-1350	SFd	H	5.83–8.81	Own VT-346	O4IHV	432	604	c	TX	60	3/4 x2 11/16 x8 1/2	C
6	C-1-K6	▲2666	129	171	19000	5580	8.25/20D▲	9.00/20	Own TX-346	6–3 7/16 x4.8	265	7.0	228	136●3600	4–2 1/2–5.1	Y	NP-90150	5	Tim H-101	HyF	H	6.8 –7.2	Own TX-346	O4IHV	432	604	c	TX	60	3/4 x2 11/16 x8 1/2	CP
7	C-1-KA6	▲2908	129	171	19000	5525	8.25/20D▲	9.00/20	Own TX-346	6–3 7/16 x4.8	265	7.0	228	136●3600	4–2 1/2–5.1	Y	NP-90150	5	Eat 16500	SFd	H	6.14–9.04	Own TX-346	O4IHV	432	604	c	TX	60	3/4 x2 11/16 x8 1/2	CP
8	C-1-KMA6	3128	108	162	19000	5500	8.25/20D▲	9.00/20	Own TX-358	6–3 7/16 x4.8	265	7.0	216	114–3600	4–2 1/2–5.1	Y	NP-90280	5	Eat 16500	SFd	H	6.14–9.04	Own TX-358	O4IHV	432	604	c	TX	60	3/4 x2 11/16 x8 1/2	CP
9	C-1-K8	▲2786	129	171	19000	5630	8.25/20D▲	9.00/20	Own VTX-346	8–3 1/16 x3 1/4	241	7.5	220	133–3800	5–2 3/8–4.8	Y	NP-90150	5	Tim H-101	HyF	H	6.8 –7.2	Own TX-346	O4IHV	432	604	c	TX	60	3/4 x2 11/16 x8 1/2	CP
10	C-1-KA8	▲3028	129	171	19000	5525	8.25/20D▲	9.00/20	Own VTX-346	8–3 1/16 x3 1/4	241	7.5	220	133–3800	5–2 3/8–4.8	Y	NP-90150	5	Eat 16500	SFd	H	6.14–9.04	Own TX-346	O4IHV	432	604	c	TX	60	3/4 x2 11/16 x8 1/2	CP
11	C-1-R8	▲3426	132	174	19500	5540	7.50/20D■	9.00/20	Own VT-348	8–3 1/16 x3 5/8	331	7.0	268	153–3600	5–2 1/2–5.1	Y	NP-90040	5	Tim H-100	HyF	H	6.8 – 7.2	Own VT-348	O4IHV	397	610	c	TX	60	3/4 x2 11/16 x9 1/16	C
12	C-1-RA8	▲3693	132	174	19500	5445	7.50/20D■	9.00/20	Own VT-348	8–3 1/16 x3 5/8	331	7.0	268	153–3600	5–2 1/2–5.1	Y	NP-90040	5	Tim H-300	SFd	H	6.16–8.19	Own VT-348	O4IHV	397	610	c	TX	60	3/4 x2 11/16 x9 1/16	C
13	C-1-T8	▲3933	132	192	22000	7050	8.25/20D▲	10.00/20	Own VT-350	8–3 1/16 x3 5/8	331	7.0	294	172–4000	5–2 1/2–5.1	Y	NP-90030	5	Tim L-100	HyF	H	6.8 –7.2	Tim 32500	O4IHV	425	666	c	TX	60	1/4 x3x10	C
14	C-1-TA8	▲4228	132	192	22000	7200	8.25/20D▲	10.00/20	Own VT-350	8–3 1/16 x3 5/8	331	7.0	294	172–4000	5–2 1/2–5.1	Y	NP-90030	5	Tim L-300	SFd	H	6.64–9.93	Tim 32500	O4IHV	425	666	c	TX	60	1/4 x3x10	C
15	C-1-V8	▲4242	132	192	24000	7100	9.00/20D†	11.00/20	Own VTX-350	8–3 1/16 x3 5/8	331	7.0	291	172–4000	5–2 1/2–5.1	Y	NP-90030	5	Tim Q-100	HyF	H	** –7.8	Tim 32500	O4IHV	486	770	c	TX	60	1/4 x3x10	C
16	C-1-VA8	▲4562	132	192	24000	7300	9.00/20D†	11.00/20	Own VTX-350	8–3 1/16 x3 5/8	331	7.0	294	172–4000	5–2 1/2–5.1	Y	NP-90030	5	Tim QT-300	SFd	H	6.63–9.93	Tim 32500	O4IHV	486	770	c	TX	60	1/4 x3x10	C
17	C-1-Y6	▲4667	130	190	28000	8525	9.00/20D†	11.00/20	Own T-352	6–4 1/16 x5 1/4▲	413	6.5	343	171–3200	7–3–11.2	Y	Cla 290-V2	5	Tim Q-100	HyF	H	6.83–7.4	Tim FD-900	O4IHV	486	770	c	TX	60	1/16 x3 1/16 x10 1/16	CC
18	C-1-YA6	▲4987	130	190	28000	8525	9.00/20D†	11.00/20	Own T-352	6–4 1/16 x5 1/16	413	6.5	343	171–3200	7–3–11.2	Y	Cla 290-V2	5	Tim R-300A	SFd	H	6.42–9.49	Tim FD-900	O4IHV	486	770	c	TX	60	1/16 x3 1/16 x10 1/16	CC
	(School Bus)																														
19	C-1-FS6	1475	153	153	12000	4010	6.50/20D	7.00/20	Own TS-342	6–3 1/16 x4 5/8	230	7.3	194	110–3600	4–2 1/2–4.8	N	NP-89960	4	Own TS-342	HyF	H	5.63–6.83	Own TS-342	O4IH	336	480	Ce	TX	.....	1/4 x2 11/16 x8 1/2	CC
20	C-1-HS6	1768	193	193	16000	4735	7.50/20D	8.25/20	Own TS-344	6–3 7/16 x4 1/2	250	7.0	210	120–3600	4–2 1/2–5.1	Y	NP-89960	4	Own TS-344	HyF	H	6.29–6.83	Own TS-344	O4IHV	336	480	Cc	TX	.....	1/16 x2 1/16 x8 1/2	CC
21	C-1-J86	2427	213	213	17500	5275	7.50/20D	9.00/20	Own TS-346	6–3 7/16 x4.8	265	7.0	225	123–3600	4–2 1/2–5.1	Y	NP-90450	4	Own TS-346	HyF	H	6.29–6.83	Own TS-346	O4IHV	432	480	c	TX	.....	1/16 x2 1/16 x8 1/2	CC
22	C-1-RS8	3501	231	231	20000	6100	8.25/20D	9.00/20	Own VTS-348	8–3 1/16 x3 5/8	331	7.0	268	153–3600	5–2 1/2–5.1	Y	NP-90040	5	Tim H-100	HyF	H	6.8 –7.2	Tim 32516	T4IHV	397	610	c	TX	60	3/4 x2 11/16 x9 1/16	CP
23	Duplex T		136	220	20000	6600	8.25/20D	9.00/20	Her JXD	6–4x4 1/4	320	6.2	240	113–3000	7–2 1/16 x10 1/16	Y	Fu 5B330	5	Tim H100	B	H	** –7.20	Tim 32502	L4IHV	420	654	a	TX	57 3/4	9 1/16 x3 1/16 x 1/4	C
24	TH-404		136	220	20000	6900	8.25/20D	9.00/20	Her WXLC3	6–4 1/16 x4 3/8	404	5.8	312	139–2600	7–2 5/16 x13 1/16	Y	Fu 5A430	5	Tim H-300	DF	H	6.13–8.15	Tim 32502	L4IHV	420	654	a	TX	49 3/4	9 1/16 x3 1/16 x 1/4	C
25	R		136	220	28000	8820	9.00/20D	10.00/20	Her WXLC-3	6–4 1/16 x4 3/8	404	5.8	312	139–2600	7–2 5/16 x13 1/16	Y	Fu 5A43	5	Tim Q300	DF	R	6.42–8.38	Tim FD900	L4IHV	730	1016	a	TX	49 1/4	9 1/16 x3 1/16 x 1/4	C
26	8E-501		172	206	28000	9500	10.00/20	11.00/20	Her RXB	6–4 1/16 x5 1/4	501	5.4	360	137–2400	7–3x13 1/4	Y	Fu 5A620		Q200	2F	R	** –7.77	Tim FD900	BW4IA	730	1016	a	TX	61 1/4	9 1/16 x3 1/16 x 1/4	C
27	JHA		148	220	32000	9800	10.00/20D	11.00/20	Her RXB	6–4 1/16 x5 1/4	501	5.4	360	137-2400	7–3x13 1/4	Y	Fu 5A620	5	Tim S200	2F	R	** –9.83	Tim FE900	BW4IA	912	1311	a	TX	61 1/4	10 1/16 x3 1/16 x	C
28	JH-558		148	220	32000	9800	10.00/20D	11.00/20	Her RXLD	6–4 1/16 x5 1/4	558	6.3	430	154–2400	7–3 1/16 x13 1/4	Y	Fu-5C650	5	Tim S-300	DF	R	6.41–8.37	Tim FE900	BW4IA	912	1311	a	TX	60 3/4	10 1/16 x3 1/16 x	C
29	KH		148	220	34000	10500	11.00/20D	11.00/20	Her RXC	6–4 5/16 x5 1/4	529	5.4	395	132–2300	7–3x13 1/4	Y	Fu 5A620	5	Tim U-200	2F	R	** –9.83	Tim FE900	BW4IA	912	1311	a	TX	60 3/4	10 1/16 x3 1/16 x	C
30	LH		148	220	37000	11300	11.00/20D	11.00/20	Her RXLD	6–4 1/4 x5 1/4	558	5.4	430	154–2400	7–3 1/16 x13 1/4	Y	Fu 5C650	5	Tim U-200	2F	R	** –9.83	Tim FE900	BW4IA	912	1311	a	TX	60 3/4	10 1/16 x3 1/16 x	C
31	Federal 1801		136	250	19000	5760	8.25/20D	9.00/20	Her JXBF	6–3 5/16 x4 1/4	263	6.5	201	109–3200	7–2 1/16 x10 1/16	N	WG T97‡	4	Tim E100DPH	SF	H	** –6.80	Tim 30003H	LT4IHV	348	556	a	TX	60 1/2	9 1/16 x3x	T
32	1802		136	250	19000	5890	8.25/20D	9.00/20	Her JXBF	6–3 5/16 x4 1/4	263	6.5	201	109–3200	7–2 1/16 x10 1/16	N	WG T97‡	4	Tim E300DPH	dF	H	6.13–8.10	Tim 30003H	LT4IHV	348	556	a	TX	60 1/2	9 1/16 x3x	T
33	2501		136	250	21000	6025	8.25/20D	9.00/20	Her JXCF	6–3 3/4 x4 1/4	282	6.5	220	113–3200	7–2 1/16 x10 1/16	N	Cla 250V‡	4	Tim H100DPH	SF	H	** –7.20	Tim 31117H	LT4IHV	380	603	a	TX	60 1/2	9 1/16 x3x	T
34	2502		136	250	21000	6105	8.25/20D	9.00/20	Her JXCF	6–3 3/4 x4 1/4	282	6.5	220	113–3200	7–2 1/16 x10 1/16	N	Cla 250V‡	4	Tim H300DPH	dF	H	6.13–8.15	Tim 31117H	LT4IHV	380	603	a	TX	60 1/2	9 1/16 x3x	T
35	2901		136	250	24000	6535	9.00/20D	10.00/20	Her JXDF	6–4x4 1/4	320	6.5	254	125–3200	7–2 1/16 x10 1/16	Y	Cla 205V‡‡	5	Tim L16GDPH	SF	H	** –7.40	Tim 32514H	LT4IHV	466	820	a	TX	60 1/2	9 1/16 x3x	T
36	2902		136	250	24000	6695	9.00/20D	10.00/20	Her JXDF	6–4x4 1/4	320	6.5	254	125–3200	7–2 1/16 x10 1/16	Y	Cla 205V‡‡	5	Tim L300DPH	dF	H	6.32–8.22	Tim 32514H	LT4IHV	466	820	a	TX	60 1/2	9 1/16 x3x	T
37	3001		136	250	24000	6575	9.00/20D	9.00/20	Her JXLDF	6–4x4 1/2	339	6.5	288	142–3200	7–2 1/16 x10 1/16	Y	Cla 205V‡‡	5	Tim L100DPH	SF	H	** –6.83	Tim 32514H	LT4IHV	466	820	a	TX	60 1/2	9 1/16 x3x	T
38	3002		136	250	24000	6735	9.00/20D	10.00/20	Her JXLDF	6–4x4 1/2	339	6.5	288	142–3200	7–2 1/16 x10 1/16	Y	Cla 205V‡‡	5	Tim L300DPH	dF	H	6.32–8.22	Tim 32514H	LT4IHV	466	820	a	TX	60 1/2	9 1/16 x3x	T
39	3401		136	250	25000	7210	9.00/20D	10.00/20	Con T6371F	6–4 1/16 x4 5/8	371	6.4	297	145–3000	7–2 1/16 x13 1/16	Y	Cla 290V‡‡	5	Tim L100DPH	SF	H	** –7.40	Tim 32514H	LT4IHV	466	820	a	TX	60 1/2	9 1/16 x3x	T
40	3402		136	250	25000	7370	9.00/20D	10.00/20	Con T6371F	6–4 1/16 x4 5/8	371	6.4	297	145–3000	7–2 1/16 x13 1/16	Y	Cla 290V‡‡	5	Tim L300DPH	dF	H	6.32–8.22	Tim 32514H	LT4IHV	466	820	a	TX	60 1/2	9 1/16 x3x	T
41	4401		136	148	30000	7810	10.00/20	11.00/20▲	Con T6427F	6–4 1/16 x4 7/8	427	6.4	350	166–3000	7–2 1/16 x13 1/16	Y	Cla 290V‡‡	5	Tim Q100P	SF	R	** –6.83	Tim FC-900	Tw4IA	522	848	a	TD	60 1/2	9 1/16 x3x	T
42	4402		136	148	30000	8020	10.00/20	11.00/20▲	Con T6427F	6–4 1/16 x4 7/8	427	6.4	350	166–3000	7–2 1/16 x13 1/16	Y	Cla 290V‡‡	10	Tim Q300P	dF	R	6.42–8.38	Tim FC-900	Tw4IA	522	848	a	TD	60 1/2	9 1/16 x3x	T
43	Sch. Bus 1821		136	250	19000	.....	8.25/20D	9.00/20	Her JXCF	6–3 5/16 x4 1/4	282	6.5	220	113–3200	7–2 1/16 x10 1/16	Y	WG T97	4	Tim E100DPH	SF		.6.20–6.80	Tim 30008-H	LT4IVH	348	556	...	TX	60 1/2	9 1/16 x3x	T
44	Sch. Bus 2521		136	250	21000	5410	8.25/20D	9.00/20	Her JXCF	6–3 3/4 x4 1/4	282	6.5	220	113–3200	7–2 1/16 x10 1/16	Y	Cla 205V	5	Tim H100DPH	SF		.6.80–7.20	Tim 31117-H	LT4IVH	348	556	...	TX	60 1/2	9 1/16 x3x	T
45	Sch. Bus 2921		136	250	24000	5920	9.00/20D	10.00/20	Her JXDF	6–4x4 1/4	320	6.5	254	125–3200	7–2 1/16 x10 1/16	Y	Cla 205V	5	Tim L100DPH	SF		.6.83–7.20	Tim 32514-H	LT4IVH	380	603	...	TX	60 1/2	9 1/16 x3x	T
46	Sch. Bus 3021		136	250	24000	5960	9.00/20D	10.00/20	Her JXLDF	6–4x4 1/2	339	6.5	288	142–3200	7–2 1/16 x10 1/16	Y	Cla 205V	5	Tim L300DPH	SF		.6.83–7.20	Tim 32514-H	LT4IVH	466	820	...	TX	60 1/2	9 1/16 x3x	T
47	Sch. Bus 3421		136	260	25000	6595	9.00/20D	10.00/20	Con T6371F	6–4 1/16 x4 5/8	371	6.4	296	145–3000	7–2 1/16 x13 1/16	Y	Cla 290V	5	Tim L100DPH	SF		.6.83–7.20	Tim 32514-H	LT4IVH	466	820	...	TX	60 1/2	9 1/16 x3x	T
	Ford Courier																														
48	Sedan Dlvy.		115	115	4500	3231	6.70/15S	7.10/15S	Own	6–3.62x3.6	223	7.2	193	115–3900	4–2 1/16 x3 11/16	...	Own	3	Own	H½	H	3.54–4.09	Own	O4IH	159	259	...	21M	.....	4x2x 1/4	T
49	Sedan Dlvy.		115	115	4500	3331	6.70/15S	7.10/15S	Own	8–3 1/16 x3.1	239	7.2	214	130–4200	5–2 1/16 x3 11/16	...	Own	3	Own	H½	H	3.54–4.09	Own	O4IH	159	259	...	21M	.....	4x2x 1/4	T
	F-100																														
50	Cowl		110	110	4800	2298	6.00/16S	6.50/16S	Own	6–3.62x3.6	223	7.2	193	115–3900	4–2 1/16 x3 11/16	...	Own	3	Own	H½	H	3.92–4.27	Own	O4IH	179	259	...	21M	41	5 11/16 x2 1/16 x 1/16	C
51	Cowl		110	110	4800	2398	6.00/16S	6.50/16S	Own	8–3 1/16 x3.1	239	7.2	214	130–4200	5–2 1/16 x3 11/16	...	Own	3	Own	H½	H	3.92–4.27	Own	O4IH	179	259	...	21M	41	5 11/16 x2 1/16 x 1/16	C
	F-250																														
52	Cowl		118	118	6900	2628	6.50/16S	7.50/17S	Own	6–3.62x3.6	223	7.2	193	115–3900	4–2 1/16 x3 11/16	...	Own	3	Own	HF	H	** –4.86	Own	O4IH	196	302	...	TX	49	6x2 1/16 x 1/4	C
53	Cowl		118	118	6900	2728	6.50/16S	7.50/17S	Own	8–3 1/16 x3.1	239	7.2	214	130–4200	5–2 1/16 x3 11/16	...	Own	3	Own	HF	H	** –4.86	Own	O4IH	196	302	...	TX	49	6x2 1/16 x 1/4	C
	F-350																														
54	Cowl		130	130	9500	3083	7.00/17S	7.50/16	Own	6–3.62x3.6	223	7.2	193	115–3900	4–2 1/16 x3 11/16	...	Own	3	Own	HF	H	5.14–5.83	Own	O4IH	231	355	...	TX	61	7x2 3/16 x 1/16	C
55	Cowl		130	130	9500	3183	7.00/17S	7.50/16	Own	8–3 1/16 x3.1	239	7.2	214	130–4200	5–2 1/16 x3 11/16	...	Own	3	Own	HF	H	5.14–5.83	Own	O4IH	231	355	...	TX	61	7x2 3/16 x 1/16	C
	F-500																														
56	Cab		130	154	14000	▲4170	6.50/20D	7.50/20	Own	6–3.62x3.6	223	7.2	193	115–3900	4–2 1/16 x3 11/16	...	Own	4	Own	HF	H	6.2 –6.8	Own	O4IH	323	494	...	TX	61	7x2 3/16 x 1/16 △	C
57	Cab		130	154	14000	▲4270	6.50/20D	7.50/20	Own	8–3 1/16 x3.1	239	7.2	214	130–4200	5–2 1/16 x3 11/16	...	Own	4	Own	HF	H	6.2 –6.8	Own	O4IH	323	494	...	TX	61	7x2 3/16 x 1/16 △	C
	F-600																														
58	Cab		130	172	16000	▲4695	7.50/20D	8.25/20	Own	8–3 1/16 x3.1	239	7.2	214	130–4200	5–2 1/16 x3 11/16	...	Own	4	Own	HF	H	6.8 –7.2	Own	O4IH	366	561	...	TX	61	8 1/16 x2 1/16 x 1/16	C
59	Cab		130	172	16000	▲4715	7.50/20D	8.25/20	Own	8–3.62x3.1	256	7.2	226	138–3900	5–2 1/16 x3 11/16	...	Own	4	Own	HF	H	6.8 –7.2	Own	O4IH	366	561	...	TX	61	8 1/16 x2 1/16 x 1/16	C
	F-700																														
60	Cab		132	192	19500	▲5385	7.50/20D	9.00/20	Own	8–3.62x3.1	256	7.2	226	138–3900	5–2 1/16 x3 11/16	...	Own	4	Own	HF	H	** –7.2	Own	O4IH	444	697	...	TX	61	9x3x 1/16 □	L
	F-750																														
61	Cab		132	192	19500	▲5830	8.25/20D	9.00/20	Own	8–3 .56x3 1/16	279	7.2	246	152–3800	5–2 5/16 x4 1/16	...	Own	5	Own	HF	H	** –7.2	Own	O4IH	444	697	...	TX	61	9x3x 1/16	L
	F-800																														
62	Cab		132	192	22000	▲6380	9.00/20D	10.00/20	Own	8–3 .8x3 1/16	317	7.2	286	170–3900	5–2 5/16 x4 1/16	...	Own	5	Own	SF	H	7.17–7.67	Own	O4IH	485	729	...	TX	61	9x3x 1/16	L
	F-900																														
63	Cab		132	192	27000	▲6600	10.00/20D	11.00/22	Own	8–3 .8x3 1/16	317	7.2	286	170–3900	5–2 5/16 x4 1/16	...	Own	5	Own	SF	H	7.17–7.67	Own	O4IH	542	829	...	TX	61	9x3x 1/16	L
	T-700 Tandem																														
64	Cab		144	192	27000	▲7475	7.50/20D	8.25/20	Own	8–3.62x3.1	256	7.2	226	138–3900	5–2 1/16 x3 11/16	...	Own	5	Own	HF	H	** –6.7	Own	O6IH	625	980	...	TX	73	9x3x 1/16	L
65	Cab		144	192	27000	▲7715	7.50/20D	8.25/20	Own	8–3.56x3 1/16	279	7.2	246	152–3800	5–2 5/16 x4 1/16	...	Own	5	Own	HF	H	** –6.7	Own	O6IH	625	980	...	TX	73	9x3x 1/16	L
	T-800 Tandem																														
66	Cab		144	192	40000	▲9555	9.00/20D	10.00/20	Own	8–3 .8x3 1/16	317	7.2	286	170–3900	5–2 5/16 x4 1/16	...	Own	5	Own	SF	H	** –8.6	Own	O6IH	837	1232	...	TX	73	9 1/16 x3 1/16 x 5/16	L

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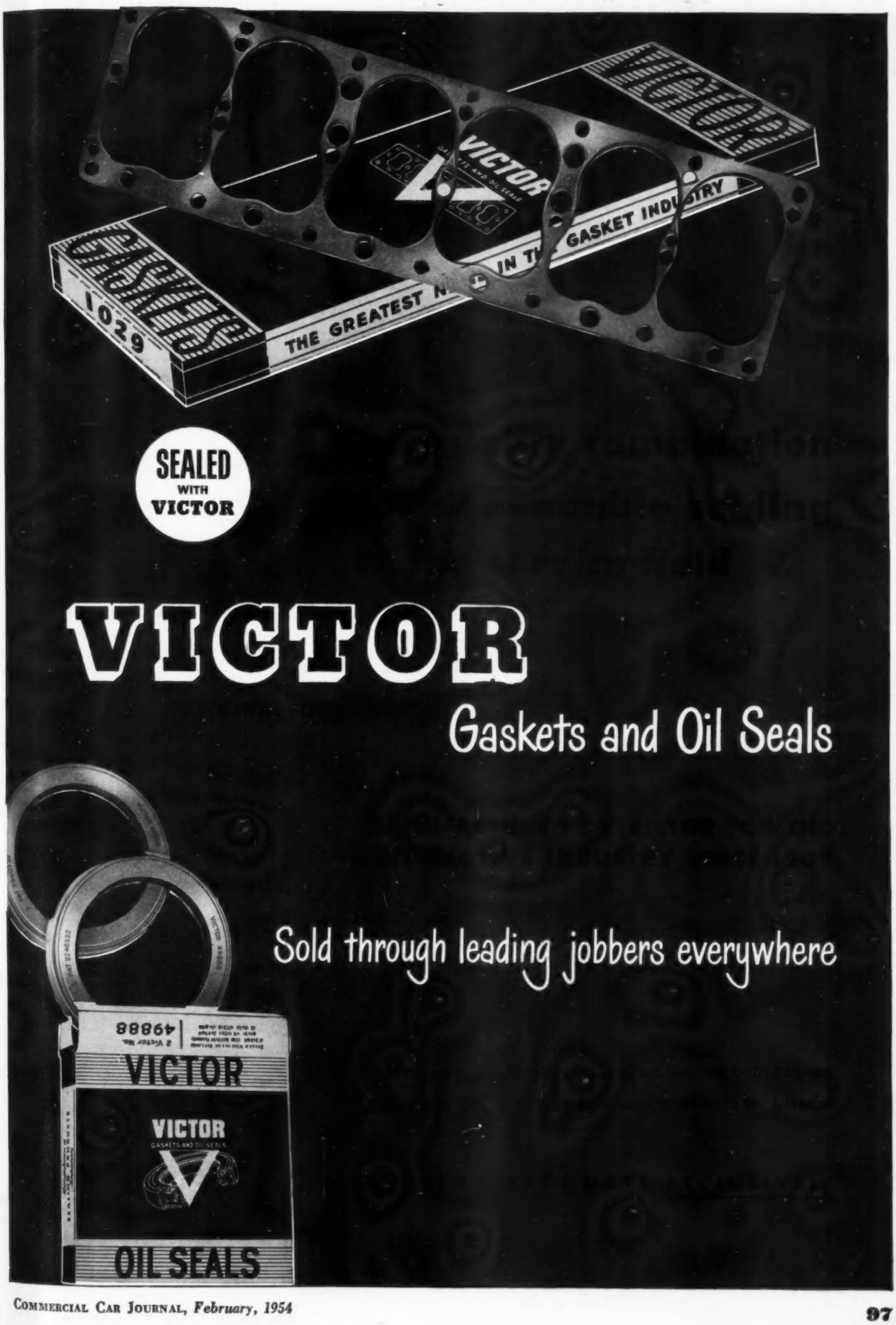
For Key to References and Abbreviations See Page 93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(Continued from Page 96)

Line Number	MAKE AND MODEL	Chassis List Price	WHEELBASE Minimum Standard	WHEELBASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number Diameter and Length	Governor Standard	TRANSMISSION Make and Model	Forward Speeds	REAR AXLE Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME Side Rail Dimensions	FRAME Type
	Ford-Cont'd																													
1	C-500 C. F. Cab		110	158	14000	▲4460	6.50/20D	7.50/20	Own	8-3½x3.1	239	7.2	214	130-4200	5-2½x3		Own	4	Own	HF	H	6.2 -6.8	Own	O4IH	323	494	TX	60	8¼x2¼x¼	C
2	C-600 C. F. Cab		110	158	16000	▲4750	7.50/20D	8.25/20	Own	8-3½x3.1	239	7.2	214	130-4200	5-2½x3		Own	4	Own	HF	H	6.8 -7.2	Own	O4IH	366	561	TX	60	8¼x2¼x¼	C
3	Cab		110	158	16000	▲4770	7.50/20D	8.25/20	Own	8-3.62x3.1	256	7.2	226	138-3900	5-2½x3		Own	4	Own	HF	H	6.8 -7.2	Own	O4IH	366	561	TX	60	8¼x2¼x¼	
4	C-700 C. F. Cab		116	156	19500	▲5685	7.50/20D	9.00/20	Own	8-3.62x3.1	256	7.2	226	138-3900	5-2½x3		Own	5	Own	HF	H	** -7.2	Own	O4IH	444	697	TX	66	9x3x¼	
5	C-750 C. F. Cab		116	156	19500	▲6035	8.25/20D	9.00/20	Own	8-3.56x3½	279	7.2	246	152-3800	5-2⅝x4		Own	5	Own	HF	H	** -7.2	Own	O4IH	444	697	TX	66	9x3x¼	
6	C-800 C. F. Cab		116	156	23000	▲6435	9.00/20D	10.00/20	Own	8-3.8x3½	317	7.2	286	170-3900	5-2⅝x4		Own	5	Own	SF	H	7.17-7.67	Own	O4IH	485	729	TX	66	9x3x¼	L
7	C-900 C. F. Cab		116	156	27000	▲6815	10.00/20D	11.00/22	Own	8-3.8x3½	317	7.2	286	170-3900	5-2⅝x4		Own	5	Own	SF	H	7.17-7.67	Own	O4IH	542	829	TX	66	9x3x¼	L
8	P-350 Parcel Divy. W/S		104	122	7800	2993	7.00/16S	7.50/17S	Own	6-3.62x3.6	223	7.2	193	115-3900	4-2½x3		Own	3	Own	HF	H	** -4.86	Own	O4IH	196	302	TX	88	6x2¼x	C
9	P-500 Parcel Divy. W/S		130	130	14000	4028	7.00/18■	7.50/20	Own	6-3.62x3.6	223	7.2	193	115-3900	4-2½x3		Own	3	Own	HF	H	6.2 -6.8	Own	O4IH	323	494	TX	114	8¼x2¼x¼	C
	B-500 School Bus																													
10	Bus Ch.		154	154	12000	3900	6.50/20D	7.50/20	Own	6-3.62x3.6	223	7.2	193	115-3900	4-2½x3		Own	4	Own	HF	H	6.2 -6.8	Own	O4IH	323	494	TX	128	8¼x2¼x¼	C
11	Bus Ch.		154	154	12000	4000	6.50/20D	7.50/20	Own	8-3½x3.1	239	7.2	214	130-4200	5-2½x3		Own	4	Own	HF	H	6.2 -6.8	Own	O4IH	323	494	TX	128	8¼x2¼x¼	C
	B-600 School Bus																													
12	Bus Ch.		192	210	16000	4610	7.50/20D	8.25/20	Own	8-3½x3.1	239	7.2	214	130-4200	5-2½x3		Own	4	Own	HF	H	6.8 -7.2	Own	O4IH	366	561	TX	166	8½x2¼x	C
13	Bus Ch.		192	210	16000	4630	7.50/20D	8.25/20	Own	8-3.62x3.1	256	7.2	226	138-3900	5-2½x3		Own	4	Own	HF	H	6.8 -7.2	Own	O4IH	366	561	TX	166	8½x2¼x	C
	B-700 School Bus																													
14	Bus Ch.		233	233	19500	5615	7.50/20D	9.00/20	Own	8-3.62x3.1	256	7.2	226	138-3900	5-2½x3		Own	4	Own	HF	H	** -7.2	Own	O4IH	444	697	TX	205	9x3x¼	L
	B-750 School Bus																													
15	Bus Ch.		233	233	20000	5985	8.25/20D	9.00/20	Own	8-3.56x3½	279	7.2	246	152-3800	5-2⅝x4		Own	5	Own	HF	H	** -7.2	Own	O4IH	444	697	TX	205	9x3x¼	L
16	Kenworth(D)●.521		153½	255	28000	12500	10.00/20	11.00/22	Cum HRB-600	6-5½x6	743	16.	540	165-1800	7-4½x16	Y	BL 8241	4	Tim U200P	H2F	H	5.91-9.76	TimFe900DPA	Ws4IA	722	1174	a	TD	67¾	9½x3¼x	C
17	.585		153½	255	35000	11600	10.00/20	11.00/22	LeR H540	8-4½x4¼	540	6.7	460	200-2600	7-3x13	Y	Fu 5C650	5	Tim U200P	H2F	H	5.91-9.76	TimFe900DPA	Ws4IA	648	1168	a	TD	67¾	9½x3¼x	C
18	(D).801		158½	....	73400	37400	†	†	Cum NHBID-600	6-5½x6	743	16.	535	200-2100	7-4½x13	Y	Fu 10F1220	10	Own	H2F	R	**-19.23	Tim Fu900	Ws4IA	1298	1870	C	FD	.....		C
19	Linn.....A-15		120	....	9000	6000	7.50/20S	8.25/20S	Her JXE3	6-3½x4¼	245	6.5	184	91-3200	7-2 x10	Y	WGT9	4	Own 601	N	N	None	Tim F30B28H	L4IH	306	478	a	T	.....	None	
20	.....A-25		156	....	11200	6200	7.50/20S	8.25/20	Her JXE3	6-3½x4¼	245	6.5	184	91-3200	7-2 x10	Y	WGT9	4	Own 601	N	N	None	Tim F30B28H	L4IH	306	478	a	X	.....	None	
21	.....A-35		169	....	14700	7900	7.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	6.7	207	103-3200	7-2 x10	Y	WGT9	4	Own 602T	N	N	None	Tim F35	L6IH	486	744	a	X	.....	None	
22	.....A-45		205	....	16900	8100	7.50/20D	8.25/20	Her JXC	6-3¾x4¼	282	6.7	207	103-3200	7- x10	Y	WGT9	4	Own 602T	N	N	None	Tim F35	L6IH	486	744	a	X	.....	None	
23	Mar. Her. ..DVL-4		90	118	6750	.....	7.50/16S	8.25/18S	Willys MB	4-3½x4½	134	6.4	105	60-4000	3-2.33x5.48	Y	Own	3	(Front Drive)			7.10	Own	4IH	202	327	M2	.....	.....	None	
24	Peterbilt(D) ...280		175	Opt	27000	12500	10.00/20D	11.00/22	Cum NHB600	6-5½x6	743	17.	500	200-2100	7-4½x16½	Y	Spl 8041	12	TimR-230DPA	2F	R	5.91-6.51	TimFe900DPA	Ws4IA	738	1052		TD	80½	10¼x3½x	CT
25	.....280(coe)		120	Opt	27000	.....	10.00/20	11.00/22	Cum NHB600	6-5½x6	743	17.	500	200-2100	7-4½x16½	Y	Spl 8041	12	TimR-230DPA	2F	R	5.91-6.51	TimFe900DPA	Ws4IA	738	1052		TD	69½	10¾x3½x	CT
26	Reo.....F-14-1		130	172	14000	4230	6.50/20	7.50/20	Int 240	6-3 x4	240	6.5	192	108-3600	4-2¾x6	N	WG T98	4	Tim C-100	HF	H	6.2 -6.8	Int F-360	WG4IVH	294	437	var	TX	65⅝	8 x3x	T
27	.....F-14-2		130	172	15000	4230	6.50/20	7.50/20	Int 240	6-3 x4	240	6.5	192	108-3600	4-2¾x6	N	WG T98	4	Tim C-100	HF	H	6.2 -6.8	Int F-360	WG4IVH	294	437	var	TX	65⅝	8 x3x	T
28	.....F-14R		130	172	16000	4275	7.00/20	8.25/20	Int 240	6-3 x4	240	6.5	192	108-3600	4-2¾x6	N	WG T98	4	Tim E-100	HF	H	6.2 -6.8	Int F-360	WG4IVH	294	437	var	TX	65⅝	8 x3x	T
29	.....F-14RT		130	130	16000	4805	7.00/20	8.25/20	Int 240	6-3 x4	240	6.5	192	108-3600	4-2¾x6	N	WG T98	4	Tim E-300	HFd	H	6.13-8.10	Int F-360	WG4IVH	294	437	var	TX	65⅝	8 x3x	T
30	.....F-20-1		125	185	16000	4445	7.50/20	8.25/20	Own 255	6-3¾x4½	255	6.7	189	107-3400	7-2 x9	408	YWG-T98	4	Tim E-100	HF	H	6.2 -6.8	Tim 30000	LT4IVH	340	534	var	TX	60⅝	8 x2 x	T
31	.....F-20-2		125	185	17000	4445	7.50/20	8.25/20	Own 255	6-3¾x4½	255	6.7	189	107-3400	7-2 x9	408	YWG-T98	4	Tim E-100	HF	H	6.2 -6.8	Tim 30000	LT4IVH	340	534	var	TX	60⅝	8 x2 x	T
32	.....F-20-3		125	185	18000	4525	7.50/20	9.00/20	Own 255	6-3¾x4½	255	6.7	189	107-3400	7-2 x9	408	YWG-T98	4	Tim E-100	HF	H	6.2 -6.8	Tim 31104	LT4IVH	340	584	var	TX	60⅝	8 x2 x	T
33	.....F-20T		125	125	16000	4975	8.25/20	9.00/20	Own 255	6-3¾x4½	255	6.7	189	107-3400	7-2 x9	408	YWG-T98	4	Tim E-300	HFd	H	6.13-8.10	Tim 30000	LT4IVH	340	534	var	TX	60⅝	8 x2 x	T
34	.....F-22-1		130	185	20000	5635	9.00/20	10.00/20	Own 292	6-3½x4½	292	6.5	224	124-3300	7-2 x9	408	YCla 205V	5	Tim H-100	HF	H	6.16-6.8	Tim 31104	LT4IVH	376	640	var	TX	65⅝	9x3x¼	T
35	.....F-22-2		130	185	21000	5635	9.00/20	10.00/20	Own 292	6-3½x4½	292	6.5	224	124-3300	7-2 x9	408	YCla 205V	5	Tim H-100	HF	H	6.16-6.8	Tim 31104	LT4IVH	376	640	var	TX	65⅝	9x3x¼	T
36	.....F-22-3		130	185	21000	5635	9.00/20	10.00/20	Own 292	6-3½x4½	292	6.5	224	124-3300	7-2 x9	408	YCla 205V	5	Tim H-100	HF	H	6.16-6.8	Tim 31104	LT4IVH	376	640	var	TX	65⅝	9x3x¼	T
37	.....F-22T		130	130	20000	6115	9.00/20	10.00/20	Own 292	6-3½x4½	292	6.5	224	124-3300	7-2 x9	408	YCla 205V	5	Tim H-300	HFd	H	6.67-8.85	Tim 31104	LT4IVH	376	640	var	TX	65⅝	9x3x¼	T
38	.....F-22R-1		130	185	22000	6130	10.00/20	10.00/22	Own 331	6-4½x4½	331	6.4	264	140-3200	7-2 x9	408	YCla 205V	5	Tim L-100	HF	H	6.16-7.4	Tim 32500	LT4IVH	438	748	var	TX	65⅝	9x3x¼	T
39	.....F-22R-2		130	185	24000	6130	10.00/20	10.00/22	Own 331	6-4½x4½	331	6.4	264	140-3200	7-2 x9	408	YCla 205V	5	Tim L-100	HF	H	6.16-7.4	Tim 32500	LT4IVH	438	748	var	TX	65⅝	9x3x¼	T
40	.....F-22R-3		130	185	24000	6390	10.00/20	10.00/22	Own 331	6-4½x4½	331	6.4	264	140-3200	7-2 x9	408	YCla 205V	5	Tim L-100	HF	H	6.16-7.4	Tim FD900	LT4IVH	496	825	var	TX	65⅝	9x3x¼	T
41	.....F-22RT		130	130	22000	6590	10.00/20	10.00/22	Own 331	6-4½x4½	331	6.4	264	140-3200	7-2 x9	408	YCla 205V	5	Tim L-300	HFd	H	6.36-8.28	Tim 32500	LT4IVH	438	748	var	TX	65⅝	9x3x¼	T
42	.....F-22S-1		130	185	25000	7015	10.00/20	11.00/20	Own 331	6-4½x4½	331	6.4	264	140-3200	7-2 x9	408	YCla 205V	5	Tim Q-100	HF	H	6.16-6.83	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
43	.....F-22S-2		130	185	26000	7015	10.00/20	11.00/20	Own 331	6-4½x4½	331	6.4	264	140-3200	7-2 x9	408	YCla 205V	5	Tim Q-100	HF	H	6.16-6.83	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
44	.....F-22S-3		130	185	26000	7085	10.00/20	11.00/20	Own 331	6-4½x4½	331	6.4	264	140-3200	7-2 x9	408	YCla 205V	5	Tim Q-100	HF	H	6.16-6.83	Tim FE900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
45	.....F-22ST		130	130	25000	7340	10.00/20	11.00/20	Own 331	6-4½x4½	331	6.4	264	140-3200	7-2 x9	408	YCla 205V	5	Tim Q-300	HFd	H	6.42-8.38	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
46	.....F-50-1		130	185	26000	7325	10.00/20	11.00/20	Own 160	6-4½x4½	331	6.7	290	160-3200	7-2¾x9		YCla 265V	5	Tim Q-100	HF	H	6.16-6.83	Tim FD-900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
47	.....F-50-2		130	185	28000	7325	10.00/20	11.00/20	Own 160	6-4½x4½	331	6.7	290	160-3200	7-2¾x9		YCla 265V	5	Tim Q-100	HF	H	6.16-6.83	Tim FD-900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
48	.....F-50-3		130	185	28000	7395	10.00/20	11.00/20	Own 160	6-4½x4½	331	6.7	290	160-3200	7-2¾x9		YCla 265V	5	Tim Q-100	HF	H	6.16-6.83	Tim FE-900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
49	.....F-50-T		130	130	26000	7655	10.00/20	11.00/20	Own 160	6-4½x4½	331	6.7	290	160-3200	7-2¾x9		YCla 265V	5	Tim QT-300	HFd	H	6.36-8.61	Tim FD-900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
50	.....F-23-1		130	185	26000	7405	10.00/20	11.00/22	Con T6427	6-4 x4⅛	427	6.4	348	163-2800	7-2⅛x12.1		YCla 290V	5	Tim Q-100	HF	H	6.16-6.83	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
51	.....F-23-2Q		130	185	28000	7405	10.00/20	11.00/22	Con T6427	6-4 x4⅛	427	6.4	348	163-2800	7-2⅛x12.1		YCla 290V	5	Tim Q-100	HF	H	6.16-6.83	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
52	.....F-23-2R		130	185	30000	7540	10.00/20	11.00/22	Con T6427	6-4 x4⅛	427	6.4	348	163-2800	7-2⅛x12.1		YCla 290V	5	Tim R-100	HF	H	7.4 -...	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
53	.....F-23-3		130	185	28000	7475	10.00/20	11.00/22	Con T6427	6-4 x4⅛	427	6.4	348	163-2800	7-2⅛x12.1		YCla 290V	5	Tim Q-100	HF	H	6.16-6.83	Tim FE900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
54	.....F-23T		130	130	26000	7730	10.00/20	11.00/22	Con T6427	6-4 x4⅛	427	6.4	348	163-2800	7-2⅛x12.1		YCla 290V	5	Tim Q-300	HFd	H	6.42-8.38	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
55	.....F-23D-1		130	185	26000	8085	10.00/20	11.00/22	Cum JBS600	6-4½x5	401	15.	360	150-2500	7-3⅛x7.8		YCla 292VO	5	Tim Q-100	HF	H	6.16-6.83	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
56	.....F-23D-2Q		130	185	28000	8085	10.00/20	11.00/22	Cum JBS600	6-4½x5	401	15.	360	150-2500	7-3⅛x7.8		YCla 292VO	5	Tim Q-100	HF	H	6.16-6.83	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
57	.....F-23D-2R		130	185	30000	8215	10.00/20	11.00/22	Cum JBS600	6-4½x5	401	15.	360	150-2500	7-3⅛x7.8		YCla 292VO	5	Tim R-100	HF	H	7.4 -...	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
58	.....F-23D-3		130	185	28000	8150	10.00/20	11.00/22	Cum JBS600	6-4½x5	401	15.	360	150-2500	7-3⅛x7.8		YCla 292VO	5	Tim Q-100	HF	H	6.16-6.83	Tim FE900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
59	.....F-23DT		130	130	26000	8460	10.00/20	11.00/22	Cum JBS600	6-4½x5	401	15.	360	150-2500	7-3⅛x7.8		YCla 292VO	5	Tim QT-300	HFd	H	5.62-7.60	Tim FD900	TWs4IA	620	928	var	TX	65⅝	9½x3 x	T
60	School bus. F-120L		185	185	18000	5410	7.50/20	9.00/20	Own 255	6-3¾x4½	255	6	189	107-3400	7-2 x9	408	YWG-T98	4	Tim E-100	HF	H	** -6.8	Tim 31104	LT4IVH	344	584	var	TX	158½	9½x3 x	Tf
61	.....F-120G		206½	206½	18000	5600	7.50/20	9.00/20	Own 255	6-3¾x4½	255	6.	189	107-3400	7-2 x9	408	YWG-T98	4	Tim E-100	HF	H	** -6.8	Tim 31104	LT4IVH	344	584	var	TX	179½	9½x3 x	Tf
62	.....F-120H		224½	224½	19000	5990	8.25/20	9.00/20	Own 255	6-3¾x4½	255	6.	189	107-3400	7-2 x9	408	YWG-T98	4	Tim E-100	HF	H	** -6.8	Tim 32500	LT4IVH	376	588	var	TX	197½	9½x3 x	Tf
63	.....F-122H		224½	224½	21000	6375	8.25/20	10.00/20	Own 292	6-3¾x4½	292	6.5	224	124-3300	7-2 x9	408	YCla 231F	4	Tim H-100	HF	H	6.8 -7.2	Tim 32500	LT4IVH	429	748	var	TX	197½	9½x3 x	Tf
64	.....F-122J		251½	251½	21000	6615	8.25/20	10.00/20	Own 292	6-3¾x4½	292	6.5	224	124-3300	7-2 x9	408	YCla 231F	4	Tim H-100	HF	H	6.8 -7.2	Tim 32500	LT4IVH	429	748	var	TX	224½	9½x3 x	Tf

(Turn to Page 100, Please)

For Key to References and Abbreviations See Page 93

COMMERCIAL CAR JOURNAL, February, 1954
Corr
THE FLY
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That's what you can expect from your engines... when you use Delvac Oils!

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(Continued from Page 98)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Speeds	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	Type
	Sterling																														
1	▼▼(T)..TB1301T	.....	143	153	26000	▲10375	10.00/20	11.00/22	Wau 140GKB▼▼	6-4½x5½	525	6.4	425	172-2700	7-3¼x15½	Y	Fu 5A620	5	Tim R100P	FHy	R	3.70-7.40	T FD900DPA	Ws4IA	560	930a	TX	67	‡‡	A
2	▼▼(T)..TB1501T	.....	143	153	30000	▲11100	11.00/20	12.00/24†	Wau 140GZB▼▼	6-4⅝x5½	555	6.4	450	183-2600	7-3¼x15½	Y	Fu 5C650	5	Tim U200P	2F	R	5.91-9.76	T FE900DPA	Ws4IA	622	1034a	TX	67	9x3¼x¼	A
3	(D)(T)TA1501TD	.....	173	181	30000	▲13125	10.00/20	10.00/22	Cum NHB600	6-5½x6	743	15.5	537	200-2100	7-4½x13	Y	Fu4A86-3B65	12	Tim S200P	2F	R	5.91-9.76	Tim FE900DP	Ws4IA	622	1034a	TX♦	77	‡‡	A
4	(D)(T)TA1511TD	.....	173	181	30000	▲13250	11.00/20	11.00/22	Cum NHB600	6-5½x6	743	15.5	537	200-2100	7-4½x13	Y	Fu4A86-3B65	12	Tim S200P	2F	R	5.91-9.76	Tim FE900DP	Ws4IA	622	1034a	TX♦	77	‡‡	A
5	(D)...TA1601D	.....	173	231	32000	▲13650	10.00/20	10.00/22	Cum NHB600	6-5½x6	743	15.5	537	200-2100	7-4½x13	Y	Fu4A86-3A92	12	Tim U200P	2F	R	5.91-9.76	T FE900DPA	Ws4IA	622	1034a	TX♦	77	9x3¼x¼	A
6	(D)...TA1611D	.....	173	231	32000	▲13775	11.00/20	11.00/22	Cum NHB600	6-5½x6	743	15.5	537	200-2100	7-4½x13	Y	Fu4A86-3A92	12	Tim U200P	2F	R	5.91-9.76	T FE900DPA	Ws4IA	622	1034a	TX♦	77	9x3¼x¼	A
7	.....HA1101	.....	148	215	22000	▲ 8825	9.00/20	10.00/20	Wau 6MZA	6-4¼x4¾	404	5.6	290	130-3000	7-2⅝x12½	Y	Fu 5A43	5	Tim L100DPH	FHy	R	4.11-7.20	Tim 32502H	T4HIV	374	646a	TX	67	‡‡	A
8	.....HA1401	.....	148	215	28000	▲10050	10.00/20	12.00/20‡	Wau 6MZA	6-4¼x4¾	404	5.6	290	130-3000	7-2⅝x12½	Y	Fu 5A43	5	Tim R200P	2F	R	5.91-10.2	T FD900DPA	Ws4IA	580	930a	TX	67	9x3¼x¼	A
9	.....HA1601	.....	148	215	32000	▲10823	10.00/20	11.00/24	Wau 6SRKR	6-4⅝x5½	517	5.5	369	125-2250	7-3x13⅜	Y	Fu 5A62	5	Tim S200P	2F	R	5.91-9.76	T FE900DPA	Ws4IA	622	1034a	TX	67	9x3¼x¼	A
10	.....HA1701	.....	148	215	34000	▲11225	11.00/20	12.00/24†	Wau 6SRKR	6-4⅝x5½	517	5.5	369	125-2250	7-3x13⅜	Y	Fu 5A62	5	Tim U200P	2F	R	5.91-9.76	T FE900DPA	Ws4IA	622	1034a	TX	67	9¼x3⅝x3⅝	A
11	.....HB2001	.....	143	211	40000	▲12800	11.00/24	12.00/24	Wau 140GKB	6-4½x5½	525	6.4	425	172-2700	7-3¼x15½	Y	Fu5A62-3A65	15	Tim 79721	2F	R	7.69-11.3	T FE900DPA	Ws4IA	642	1098a	TX♦	67	9¼x3⅝x3⅝	A
12	(D)...HB2001D	.....	153	211	40000	▲14150	11.00/24	12.00/24	Cum HBD600	6-4⅞x6	672	17	495	150-1800	7-4½x13	Y	Fu4A86-3A92	12	Tim 79721	2F	R	7.69-11.3	T FE900DPA	Ws4IA	642	1098a	TX♦	77	9¼x3⅝x3⅝	A
13	.....HA1502	.....	148	215	30000	▲10200	10.00/20	12.00/20‡	Wau 6MZA	6-4¼x4¾	404	5.6	290	130-3000	7-2⅝x12½	Y	Fu 5A43♦	15	Own 1435W	CD	R	6.70-10.8	T FD900DPA	Ws4IA	640	1044a	JX	67	9x3¼x¼	A
14	.....HA1802	.....	148	215	36000	▲11800	11.00/22	12.00/24	Wau 6SRKR	6-4⅝x5½	517	5.5	369	125-2250	7-3x13⅜	Y	Fu 5A62♦	15	Own 1445W	CD	R	6.70-10.8	T FE900DPA	Ws4IA	680	1082a	JX	67	9¼x3⅝x3⅝	A
15	.....HA1803	.....	148	215	36000	▲12100	11.00/22	11.00/24	Wau 6SRKR	6-4⅝x5½	517	5.5	369	125-2250	7-3x13⅜	Y	Fu 5A62♦	15	Own 139W	CD	R	6.70-10.8	T FE900DPA	Ws4IA	680	1082a	JX	67	9¼x3⅝x3⅝	A
16	.....HA1813	.....	148	215	36000	▲12450	11.00/22	12.00/24	Wau 6SRKR	6-4⅝x5½	517	5.5	369	125-2250	7-3x13⅜	Y	Fu 5A62♦	15	Own 155W	CD	R	6.70-10.8	T FE900DPA	Ws4IA	680	1082a	JX	67	9¼x3⅝x3⅝	A
17	.....HB2002	.....	143	211	40000	▲12850	11.00/24	12.00/24	Wau 140GKB	6-4½x5½	525	6.4	425	172-2700	7-3¼x15½	Y	Fu 5A62♦	15	Own 160W	CD	R	5.56-9.26	T FE900DPA	Ws4IA	680	1082a	JX	67	9¼x3⅝x3⅝	A
18	(D)...HB2002D	.....	153	211	40000	▲14100	11.00/24	12.00/24	Cum HBD600	6-4⅞x6	672	17	495	150-1800	7-4½x13	Y	Fu 4A86††	12	Own 160W	CD	R	7.31-12 4	T FE900DPA	Ws4IA	680	1082a	JX	77	9¼x3⅝x3⅝	A
19	.....HB2003	.....	143	211	40000	▲13150	11.00/24	12.00/24	Wau 140GKB	6-4½x5½	525	6.4	425	172-2700	7-3¼x15½	Y	Fu 5A62♦	15	Own 153W	CD	R	5.56-9.26	T FE900DPA	Ws4IA	680	1082a	JX	67	9¼x3⅝x3⅝	A
20	(D)...HB2003D	.....	153	211	40000	▲14400	11.00/24	12.00/24	Cum HBD600	6-4⅞x6	672	17	495	150-1800	7-4½x13	Y	Fu 4A86††	12	Own 153W	CD	R	7.31-12 4	T FE900DPA	Ws4IA	680	1082a	JX	77	9¼x3⅝x3⅝	A
21	.....HB2013	.....	143	211	40000	▲13400	11.00/24	12.00/24	Wau 140GKB	6-4½x5½	525	6.4	425	172-2700	7-3¼x15½	Y	Fu 5A62♦	15	Own 155W	CD	R	5.56-9.26	T FE900DPA	Ws4IA	680	1082a	JX	67	9¼x3⅝x3⅝	A
22	(D)...HB2013D	.....	143	211	40000	▲14650	11.00/24	12.00/24	Cum HBD600	6-4⅞x6	672	17	495	150-1800	7-4½x13	Y	Fu 4A86††	12	Own 155W	CD	R	7.31-12 4	T FE900DPA	Ws4IA	680	1082a	JX	77	9¼x3⅝x3⅝	A
23	(D)...HB2503D	.....	153	211	50000	▲15850	12.00/24†	14.00/24▼	Cum HBD600	6-4¾x6	672	17	495	150-1800	7-4½x13	Y	Fu 4A86††	12	Own 177W	CD	R	7.31-12 4	Tim 27462W	Ws4IA	786	1212a	JX	77	9¼x3⅝x3⅝	AL
24	**Studebaker**....2R5	.....	112	112	4600	2125	6.00/16S	6.50/16S	Own 1R	6-3x4	170	7.0	138	85-4000	4-2⅛x5⅛	N	Own 673519	3	Own 680233	Hy	H	4.09-4.89	Own 678860	Wg4IH	170	276	CO	2I	40	7x2¼x½	T
25	.....2R6	.....	112	112	4600	2365	6.00/16S	6.50/16S	Own 6R	6-3⅛x4¾	245	7.0	205	102-3200	4-2⅛x5	N	Own 679807	3	Own 680233	Hy	H	4.09-4.89	Own 678860	Wg4IH	170	276	CO	2I	40	7x2¼x½	T
26	.....2R10	.....	122	122	6100	2400	6.50/16S	7.50/16S	Own 1R	6-3x4	170	7.0	138	85-4000	4-2⅛x5⅛	N	Own 673519	3	Own 679819	SF	H	4.86-5.57	Own 678860	Wg4IH	198	314	CO	2I	50	7⅛x2⅛x⅝	T
27	.....2R11	.....	122	122	6100	2640	6.50/16S	7.50/16S	Own 6R	6-3⅛x4¾	245	7.0	205	102-3200	4-2⅛x5	N	Own 679146	3	Own 679818	SF	H	4.11-4.86	Own 678860	Wg4IH	198	314	CO	2I	50	7⅛x2⅛x⅝	T
28	.....2R14-21	.....	121	121	7800	3245	7.00/17S	7.00/20	Own 6R	6-3⅛x4¾	245	7.0	205	102-3200	4-2⅛x5	N	Own 680438	4	Own 680404	SF	H	5.14-6.66	Own 677091	Wg4IH	226	342	Ce	TX	50¼	8x2⅜x⅝	T
29	.....2R15-21	.....	121	121	7800	3005	7.00/17S	7.00/20	Own 2R	6-3x4	170	7.0	138	85-4000	4-2⅛x5⅛	N	Own 680437	4	Own 680404	SF	H	5.83-6.66	Own 677091	Wg4IH	226	342	Ce	TX	50¼	8x2⅜x⅝	T
30	.....2R15-31	.....	131	131	10000	3065	7.00/17S	7.00/20	Own 2R	6-3x4	170	7.0	138	85-4000	4-2⅛x5⅛	N	Own 680437	4	Own 680404	SF	H	5.83-6.66	Own 677091	Wg4IH	226	342	Ce	TX	60¼	8⅛x2¾x⅝	T
31	.....2R16A	.....	131	195	14000	3665	6.50/20D	8.25/20	Own 4R	6-3⅛x4¾	245	7.0	205	102-3200	4-2⅛x5	N	Own 680438	4	Own 680399♦	SF	H	5.14-6.66	Own 674484	Wg4IH	294	442	Ce	TX	60¼	8⅛x2⅞x⅝	T
32	.....2R16B	.....	131	195	15000	3695	6.50/20D	8.25/20	Own 4R	6-3⅛x4¾	245	7.0	205	102-3200	4-2⅛x5	N	Own 680438	4	Own 680399♦	SF	H	5.14-6.66	Own 674484	Wg4IH	294	442	Ce	TX	60¼	8⅛x2⅞x⅝	T
33	.....2R17A	.....	131	195	16000	4200	7.50/20D	9.00/20	Own 4R	6-3⅛x4¾	245	7.0	205	102-3200	4-2⅛x5	N	Own 680439	4	Own 68040 5††	Hy	H	6.20-6.80	Own 674484	Wg4IH	367	553	Ce	TX	60¼	8⅛x2⅞x⅝	P
34	.....2R17B	.....	131	195	18000	4230	7.50/20D	9.00/20	Own 4R	6-3⅛x4¾	245	7.0	205	102-3200	4-2⅛x5	Y	Own 680439	4	Own 68040 5††	Hy	H	6.20-6.80	Own 674484	Wg4IH	367	553	Ce	TX	60¼	8⅛x2⅞x⅝	P
35	**Ward La Fr**...D-1	.....	149	220	25000	▲ 9500	10.00/20	11.00/20	Con T6427	6-4⅛x4⅞	427	5.1	340	152-2600	7-2⅞x13½	Y	Ful 5A430	5	Tim Q-100	B	R	**-6.83	Tim FD900	Ws4A	600	928	C	TM	68¼	9⅞x3x¼	T
36	.....D-1C	.....	149	220	29000	▲ 9500	11.00/20	11.00/22	Con T6427	6-4⅛x4⅞	427	5.1	340	152-2600	7-2⅞x13½	Y	Ful 5A430	5	Tim U-200	S2	R	**-7.08	Tim FD900	Ws4A	673	1031	C	TM	68¼	9⅞x3x¼	T
37	.....D-3	.....	149	220	29000	▲10000	11.00/20	11.00/22	Con R6572	6-4⅝x5½	572	5.9	440	189-2600	7-3¼x14½	Y	Ful 5C650	5	Tim R-200	S2	R	**-7.84	Tim FD900	Ws4B	673	1031	C	TM	68¼	10x3½x⅞	T
38	.....D-3S	.....	149	220	29000	▲10000	11.00/20	11.00/22	Cum R6602	6-4⅞x5½	602	5.9	463	198-2600	7-3¼x14½	Y	Ful 5C650	5	Tim R-200	S2	R	**-7.84	Tim FD900	Ws4B	673	1031	C	TM	68¼	10x3½x⅞	T
39	(D).....D-5	.....	149	220	35000	▲12500	11.00/22	11.00/22	Cum HB600	6-4¼x6	672	17	500	150-1800	7-4½x16¾	Y	Ful 5C650	5	Tim R-200	S2	R	**-6.42	Tim 27463	Ws4B	681	1041	C	TM	68¼	10x3½x⅞	T
	White-Freightliner																														
40	(c.o.e.)...WF 42	.....	114	120	.....	▲11300	10.00/22	.....	Cum NHB	6-5½x6	743	13.	575	200-2100	7-4½x16½	Y	Fu 4A86	8	Eat 22501	SFd	H	4.33-6.67	Tim 27061	O4IA	645	1050a	TD	72	10¾x3⅛x¼	DL
	Four-Wheel-Drive																														
41	**Coleman**....G-55	.....	150	160	34000	12000	11.00/20	12.00/20	Buda LO-525	6-4½x5½	525	6.7	400	150-2200	7-3x7¾	Y	Fu 5A650	5	OW-289-CM	2		9.66-....	OW	TW1A	598	9214	FD	84	10x3x¾	C
42	.....G-55	.....	150	160	34000	12000	11.00/20	12.00/20	Wau 140GZ	6-4⅝x5½	554	6.4	451	188-2600	.....	Y	Fu 4A86	4	OW-289-CM	2		**-9.66	OW	TW1A	598	921	FD	84	10x3x¾	C
43	(D).....D-55	.....	150	160	34000	13000	11.00/20	12.00/20	Cum HB600	6-4¼x6	672	17	500	150-1800	.....	Y	Fu 5A650	5	OW-289-CM	2		**-9.66	OW	TW1A	598	921	FD	84	10x3x¾	C
44	**Corbitt**...G101F20	.....	Opt	....	20000	....	8.25/20	9.00/20	Con M6330	6-4x4⅜	330	6.1	248	104-2800	7-2⅝x12	Y	Cla 205VO	5	Tim H100	HF	H	**-6.8	Tim F35	LT4IHV	420	654a	TX	Opt	8x3¼x¼	T
45	.....G301F24	.....	Opt	....	24000	....	9.00/20	10.00/20	Con B6371	6-4½x5⅛	371	6.0	280	100-2600	7-2⅞x13½	Y	Fu 5A43	5	Tim R2090	2F	H	**-8.43	Tim F2090	LT4IHV	520	788a	TD	Opt	9x2¾x¼	T
46	.....G601F31	.....	Opt	....	32000	....	10.00/20	11.00/24	Con R6513	6-4½x5⅝	513	5.9	400	170-2600	7-3¼x14½	Y	Fu 5A620	5	Tim 1357	2F	H	6.65-7.33	Tim F3110	Ws4IA	644	984a	TD	Opt	10½x3¼x¼	TL
47	(T)(D) D808U32	.....	Opt	....	32000	....	10.00/20	11.00/24	Cum HRBB600	6-5½x6	743	17	540	180-2000	7-4½x16½	Y	Fu 5C720	5	Tim 1758	2F	H	**-7.33	Tim F3100	Ws4IA	644	984a	TD	Opt	10½x3¼x¼	TL
48	**Dodge**...C-1-PW6	1955	126	126	8700	3950	7.50/16S	9.00/16S	Own T-137	6-3¼x4½	230	7.3	191	103-3600	4-2½x4.8	Y	NP-89960	4	Own T-137	HyF	H	4.89-5.83	Own T-137	O4IH	210	310	CO	PX	52¾	11 x2 ⅛x6⅛	C
49	**Federal**.....4501	.....	143	203	31000	8470	10.00/20D	11.00/20	Con T6427F*	6-4⅛x4⅞	427	6.4	350	166-3000	7-2⅞x13½	Y	Cla 290V‡‡	5	Tim Q100P	SF	R	**-6.83	Tim FD-900	Tw4IA	606	933a	TD	60½	10½x3½x⅞	T
50	4502	.....	143	203	31000	8700	10.00/20D	11.00/20	Con T6427F*	6-4⅛x4⅞	427	6.4	350	166-3000	7-2⅞x13½	Y	Cla 290V‡‡	5	Tim Q300P	dF	R	6.42-8.38	Tim FD-900	Tw4IA	606	933a	TD	60½	10½x3½x⅞	T
51	5501	.....	143	203	38000	9150	11.00/20D	12.00/20	Con T6427F*	6-4⅛x4⅞	427	6.4	350	166-3000	7-2⅞x13½	Y	Cla 290V‡‡	5	Tim U300P	HF	R	6.42-8.38	Tim FD-900	Tw4IA	722	1051a	TD	60½	10½x3½x⅞	T
52	5502	.....	143	203	38000	9390	11.00/20D	12.00/20	Con T6427F*	6-4⅛x4⅞	427	6.4	350	166-3000	7-2⅞x13½	Y	Cla 290V‡‡	5	Tim U300P	HF	R	6.42-8.38	Tim FD-900	Tw4IA	722	1051a	TD	60½	10½x3½x⅞	T
53	6001	.....	143	203	39000	9815	11.00/22D	12.00/20	Con U6501F*	6-4½x5¼	501	....	....	182-2600	.....	Y	.....	....	.....	SF	....	.....	.....	Tw4IA	.....	.....	.....	.....	.....	.....	.....
54	6002	.....	143	203	39000	9962	11.00/22D	12.00/20	Con U6501F*	6-4½x5¼	501	6.4	414	182-2600	7-2⅜x14½	Y	Fu 5A655‡	5	Tim U200P‡	HF	R	6.53-8.53	Tim FD-900	Tw4IA	722	1051a	TX	60½	10½x3½x⅞	T
55	6501	.....	141	201	40000	10505	11.00/22D	12.00/20	Con R6602F*	6-4⅜x5⅜	602	6.4	480	212-2800	7-3¼x14½	Y	Fu 5A655‡	5	Tim U300P‡	HF	R	6.53-8.53	Tim FE-900	Ws4IA	722	1051a	TX	60½	10½x3½x⅞	T
56	6502	.....	141	201	40000	10655	11.00/22D	12.00/20	Con R6602F*	6-4⅜x5⅜	602	6.4	480	212-2800	7-3¼x14½	Y	Fu 5A655‡	5	Tim U300P‡	HF	R	6.53-8.53	Tim FE-900	Ws4IA	722	1051a	TX	60½	10½x3½x⅞	T
57	**FWD**.....141	.....	136	Opt	14500	▲5500	7.50/20D	10.00/20S	Her QXLD-3	6-3⅞x4¼	236	6.5	190	97-3200	7-2½x10⅛	Y	WG T9A	8	Tim 53547	SF	H	**-6.67	Tim F30	T4IHV	324	518a	T4	72	8x3x¼	T
58	170	.....	144	....	17500	▲7500	8.25/20D	10.00/20S	Wau 195GKA	6-4½x4	320	....	243	125-3200	.....	Y	Fu 5A43	5	Own 23	SF	....	**-5.72	Own 22	4IHV	....	583	....	T4	....	9x3x¼	T
59	220	.....	144	Opt	22000	▲8000	9.00/20D	10.00/20	Wau 195GKA	6-4½x4¼	320	6.2	243	125-3200	4-2⅝x7½	Y	Own 25	5	Own 23	SF	H	**-5.28	Own 22	Wg4IHV	419	706a	T4	79½	9x3x¼	T
60	(D).....223D	.....	144	Opt	22000	▲8785	9.00/20D	10.00/20	GMC 3-71	3-4¼x5	213	16.	300	113-2000	4-3½x4½	Y	Own 250	5	Own 23	SF	H	**-5.28	Own 22	Wg4IHV	419	706a	T4	79½	9x3x¼	T
61	262	.....	144	Opt	26000	▲9000	10.00/20D	10.00/20	Wau 135GKB	6-4¼x5	426	6.3	337	148-2800	7-3¼x14	Y	Own 25	5	Own 23	SF	H	**-5.28	Own 22	Wg4IHV	419	706a	T4	79½	9x3x¼	T
62	(D).....264D	.....	144	Opt	26000	▲8935	10.00/20D	10.00/20	GMC 4-71	4-4¼x5	284	16.	400	150-2100	5-3½x5⅝	Y	Own 250	5	Own 23	SF	H	**-5.28	Own 22	Wg4IHV	419	706a	T4	79½	9x3x¼	T
63	.....M262	.....	154	Opt	26000	▲9000	10.00/20D	10.00/20	Wau 135GKB	6-4¼x5	426	6.3	337	148-2800	7-3¼x14	Y	Own 25	5	Own 23	SF	H	**-5.28	Own 22	Wg4IHV	419	706a	T4	89¾	9x3x¼	T
64	(D).....M264D	.....	154	Opt	26000	▲8935	10.00/20D	10.00/20	GMC 4-71	4-4¼x5	284	16.	400	150-2100	5-3½x5⅝	Y	Own 250	5	Own 23	SF	H	**-5.28	Own 22	Wg4IHV	419	706a	T4	89¾	9x3x¼	T
65	.....T273	.....	139	Opt	27000	▲9500	10.00/20D	10.00/20	Wau 135GZB	6-4⅝x5	451	6.3	354	153-2800	7-3¼x14	Y	Fu R45C	10	Own 23	SF	H	**-5.28	Own 22	Wg4IHV	419	706a	T4	74½	9x3x¼	T
66	.....T285	.....	139	Opt	28000	▲10000	10.00/20D	10.00/20	Wau 140GKB	6-4½x5½	525	6.4	425	172-2600	7-3¼x13⅜	Y	Fu R95C	10	Own 23	SF	H	**-5.28	Own 22	Wg4IHA	419	706a	T4	74½	9x3x¼	T
67	.....T286	.....	139	Opt	28000	▲10900	10.00/20D	10.00/20	Wau 140GZB	6-4⅝x5½	554	6.4	448	188-2600	7-3¼x13⅜	Y	Fu R95C	10	Own 23	SF	H	**-5.28	Own 22	Wg4IHA	419	706a	T4	74½	9x3x¼	T
68	(D).....T284D	.....	139	Opt	28000	▲10225	10.00/20D	10.00/20	GMC 4-71	4-4¼x5	284	16.	400	150-2100	5-3½x5⅝	Y	Fu R950C	10	Own 23	SF	H	**-5.28	Own 22	Wg4IHA	419	706a	T4	74½	9x3x¼	T
69	(D).....T288D	.....	139	Opt	28000	▲10900	10.00/20D	10.00/20	CumHRBB-600	6-5½x6	743	16.	505	180-2000	7-4½x	Y	Fu R950C	10	Own 23	SF	H	**-5.28	Own 22	Wg4IHA	419	706a	T4	74½	9x3x¼	T
70	323	.....	150	Opt	32000	▲12000	11.00/20D	13.00/20S	Wau 135GZB	6-4⅝x5	451	6.3	354	153-2800	7-3¼x14	Y	Own 35	5	Own 33	SF	H	**-6.14	Own 32	Wg4IHA	640	1105a	T4	90	10x3x⅜	C
71	324	.....	150	Opt	32000	▲12125	11.00/20D	13.00/20S	Wau 140GK	6-4½x5½	525	6.4	420	160-2400	7-3¼x13⅜	Y	Own 35	5	Own 33	SF	H	**-6.14	Own 32	Wg4IHA	640	1105a	T4	90	10x3x⅜	C
72	(D).....324D	.....	150	Opt	32000	▲12350	11.00/20D	13.00/20S	GMC 4-71	4-4¼x5	284	16.	400	150-2100	5-3½x5⅝	Y	Own 35	5	Own 33	SF	H	**-6.14	Own 32	Wg4IHA	640	1105a	T4	90	10x3x⅜	C
73	(D).....327D	.....	150	Opt	32000	▲12700	11.00/20D	13.00/20S	Cum HRB-600	6-5½x6	743	16.	540	165-1800	7-4½x	Y	Own 35	5	Own 33	SF	H	**-6.14	Own 32	Wg4IHA	640	1105a	T4	90	10x3x⅜	C

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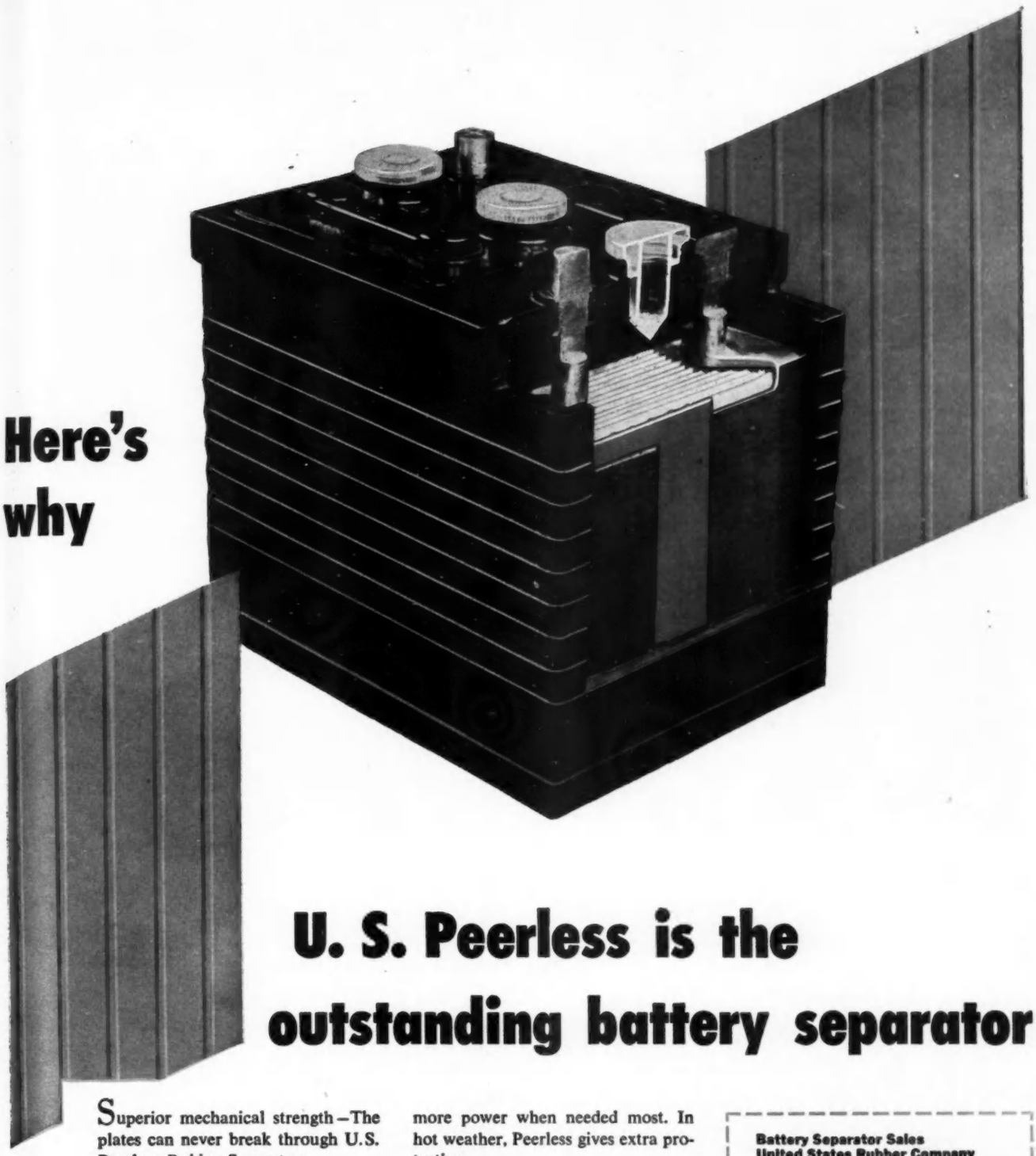

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U. S. Peerless is the outstanding battery separator

Superior mechanical strength—The plates can never break through U.S. Peerless *Rubber* Separators.

Higher porosity allows faster circulation of acid, permits up to 20% faster cranking speed.

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Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Speeds	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	Type
	FWD--Cont'd																														
1	365		150	Opt	36000	▲12600	11.00/20D	13.00/20S	Wau 140GKB	6–4½x5½	525	6.4	425	172–2600	7–3¼x13⅜	Y	Own 35	5	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x⅜	C
2	366		150	Opt	36000	▲12600	11.00/20D	13.00/20S	Wau 140GZB	6–4½x5½	554	6.4	448	188–2600	7–3¼x13⅜	Y	Own 35	5	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x⅜	C
3	(D) 368D		150	Opt	36000	▲13500	11.00/20D	13.00/20S	CumHRBB-600	6–5½x6	743	16	505	180–2000	7–4½x...	Y	Own 35	5	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x⅜	C
4	A369*		150	Opt	36000	▲12600	12.00/20S	13.00/20S	Wau 145GKB	6–5¼x6	779	6.2	595	240–2400	7–3½x17¾	Y	Own 35	10	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x⅜	C
5	408		150	Opt	40000	▲14000	12.00/20D	14.00/20S	Wau 145GK	6–5¼x6	779	6.2	595	216–2000	7–3½x17¾	Y	Own 55	10	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x⅜	C
6	409		150	Opt	40000	▲14000	12.00/20D	14.00/20S	Wau 145GKB	6–5¼x6	779	6.2	595	240–2400	7–3½x17¾	Y	Own 55	10	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x⅜	C
7	(D) 406D		150	Opt	40000	▲14400	12.00/20D	14.00/20S	GMC 6-71	6–4¼x5	426	16	600	200–2000	7–3½x7⅜	Y	Own 55	10	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x⅜	C
8	(D) 409D		150	Opt	40000	▲14600	12.00/20D	14.00/20S	Cum NHB-600	6–5½x6	743	16	535	200–2100	7–4½x...	Y	Own 55	10	Own 33	SF	H	** -6.14	Own 32	Wg4IHA	640	1105	a	T4	90	10x3x⅜	C
9	509		150	Opt	50000	▲16000	12.00/24D	14.00/20S	Wau 145GKB	6–5¼x6	779	6.2	595	240–2400	7–3½x17¾	Y	Own 55	10	Tim 79721	SF	H	** -7.69	Tim F7901W	Wg4IA	693	1144	a	T4	90	10x3x⅜	C
10	(D) 506D		150	Opt	50000	▲16400	12.00/24D	14.00/20S	GMC 6-71	6–4¼x5	426	16	600	200–2000	7–3½x7⅜	Y	Own 55	10	Tim 79721	SF	H	** -7.69	Tim F7901W	Wg4IA	693	1144	a	T4	90	10x3x⅜	C
11	(D) 509D		150	Opt	50000	▲16600	12.00/24D	14.00/20S	Cum NHB-600	6–5½x6	743	16	535	200–2100	7–4½x...	Y	Own 55	10	Tim 79721	SF	H	** -7.69	Tim F7901W	Wg4IA	693	1144	a	T4	90	10x3x⅜	C
	Marmon-Herr.																														
12	M104		110		5300	3650	6.50/16S	6.50/16	Ford	8–3.1x3⅛	239	6.8	194	106–3500	3–2.5x4.9	N	Ford	4	Ford	Hy	H	** -4.27	Own	F4H	178	259	a	X	40.5	5.9x2.2x.15	C
13	6M104		110		5300	3650	6.50/16S	6.50/16	Ford	6–3.56x3.6	215	7.0	185	101–3500	4–2.5x4.5	N	Ford	4	Ford	Hy	H	** -4.27	Own	F4H	178	259	a	X	40.5	5.9x2.2x.15	C
14	M254		118		8000	4200	7.50/17S	7.50/17	Ford	8–3.1x3⅛	239	6.8	194	106–3500	3–2.5x4.9	N	Ford	8	Ford	Hy	H	** -4.86	Own	F4H	181	282	a	PX	48.5	6.0x2.2x.19	C
15	6M254		118		8000	4200	7.50/17S	7.50/17	Ford	6–3.56x3.6	215	7.0	185	101–3500	4–2.5x4.5	N	Ford	8	Ford	Hy	H	** -4.86	Own	F4H	181	282	a	PX	48.5	6.0x2.2x.19	C
16	M354		130		10200	4300	7.50/17S	7.50/17	Ford	8–3.1x3⅛	239	6.8	194	106–3500	3–2.5x4.9	N	Ford	8	Ford	Hy	H	** -5.83	Own	F4H	223	355	a	PX	60.5	7.0x2.7x.21	C
17	6M354		130		10200	4300	7.50/17S	7.50/17	Ford	6–3.56x3.6	215	7.0	185	101–3500	4–2.5x4.5	N	Ford	8	Ford	Hy	H	** -5.83	Own	F4H	223	355	a	PX	60.5	7.0x2.7x.21	C
18	6PM354		104	122	9500	4000	7.50/17S	7.50/17	Ford	6–3.56x3.6	215	7.0	185	101–3500	4–2.5x4.5	N	Ford	8	Ford	Hy	H	** -5.83	Own	F4H	181	282	a	PX	82.9	6.0x2.2x.19	C
19	M504		130	154	15500	5300	7.50/20D	8.25/20	Ford	8–3.1x3⅛	239	6.8	194	106–3500	3–2.5x4.9	N	Ford	8	Ford	Hy	H	** -6.8	Own	F4H	340	486	a	PX	60.5	8.8x2.8x.25	C
20	6M504		130	154	15500	5700	7.50/20D	8.25/20	Ford	6–3.56x3.6	215	7.0	185	101–3500	4–2.5x4.5	N	Ford	8	Ford	Hy	H	** -6.8	Own	F4H	340	486	a	PX	60.5	8.8x2.8x.25	C
21	CM504		110	158	15500	5900	7.50/20D	8.25/20	Ford	8–3.1x3⅛	239	6.8	194	106–3500	3–2.5x4.9	N	Ford	8	Ford	Hy	H	** -6.8	Own	F4H	340	486	a	PX	60.0	8.8x2.8x.25	C
22	6PM504		130		15500	5100	7.50/20S	8.25/20	Ford	6–3.56x3.6	215	7.0	185	101–3500	4–2.5x4.5	N	Ford	8	Ford	Hy	H	** -6.8	Own	F4H	340	486	a	PX	108.9	8.8x2.8x.25	C
23	BM504		154		15500	5157	7.50/20D	8.25/20	Ford	8–3.1x3⅛	239	6.8	194	106–3500	3–2.5x4.9	N	Ford	8	Ford	Hy	H	** -6.8	Own	F4H	340	486	a	PX	128.0	8.8x2.8x.25	C
24	6BM504		154		15500	5295	7.50/20D	8.25/20	Ford	6–3.56x3.6	215	7.0	185	101–3500	4–2.5x4.5	N	Ford	8	Ford	Hy	H	** -6.8	Own	F4H	340	486	a	PX	128.0	8.8x2.8x.25	C
25	M604		130	172	17000	5300	7.50/20D	8.25/20	Ford	8–3.1x3⅛	239	6.8	194	106–3500	3–2.5x4.9	N	Ford	8	Ford	Hy	H	** -6.8	Own	F4HV	371	553	a	PX	60.5	8.8x2.7x.25	C
26	B6M604		130	172	17000	5800	7.50/20D	8.25/20	Ford	6–3.5x4.4	254	6.8	217	112–3500	4–2.8x4.8	Y	Ford	8	Ford	Hy	H	** -6.8	Own	F4HV	371	553	a	PX	60.5	8.8x2.7x.25	C
27	BM604		192		17000	5561	7.50/20D	8.25/20	Ford	8–3.1x3⅛	239	6.8	194	106–3500	3–2.5x4.9	N	Ford	8	Ford	Hy	H	** -6.8	Own	F4HV	371	553	a	PX	166.0	8.9x2.9x.28	C
28	B6BM604		192		17000	5705	7.50/20D	8.25/20	Ford	6–3.5x4.4	254	6.8	217	112–3500	4–2.8x4.8	Y	Ford	8	Ford	Hy	H	** -6.8	Own	F4HV	371	553	a	PX	166.0	8.9x2.9x.28	C
29	CM604		110	158	17000	5850	7.50/20D	8.25/20	Ford	8–3.1x3⅛	239	6.8	194	106–3500	3–2.5x4.9	N	Ford	8	Ford	Hy	H	** -6.8	Own	F4HV	371	553	a	PX	60.0	8.8x2.8x.25	C
30	B6M704		132	192	21500	7150	8.25/20D	10.00/20	Ford	6–3.5x4.4	254	6.8	217	112–3500	4–2.8x4.8	Y	Ford	8	Ford	Hy	H	** -7.2	Own	F4HV	444	697	a	PX	60.5	9x3x.25	L
31	B6BM704		233		21500	7450	8.25/20D	9.00/20	Ford	6–3.5x4.4	254	6.8	217	112–3500	4–2.8x4.8	Y	Ford	8	Ford	Hy	H	** -7.2	Own	F4HV	444	697	a	PX	205.0	9x3x.25	L
32	M754		132	192	21500	7550	8.25/20D	10.00/20	Ford	8–3.56x3.5	279	7.0	244	145–3800	5–2.6x5.7	Y	Ford	10	Ford	Hy	H	** -7.2	Own	F4HV	444	697	a	PX	60.5	9x3x.25	L
33	CM754		116	156	21500	7600	8.25/20D	10.00/20	Ford	8–3.56x3.5	279	7.0	244	145–3800	5–2.6x5.7	Y	Ford	10	Ford	Hy	H	** -7.2	Own	F4HV	444	697	a	PX	66.0	9x3x.25	L
34	BM754		233		21500	7150	9.00/20D	10.00/20	Ford	8–3.56x3.5	279	7.0	244	145–3800	5–2.6x5.7	Y	Ford	10	Ford	Hy	H	** -7.2	Own	F4HV	444	697	a	PX	205.0	9x3x.25	L
35	M804		132	192	24000	7910	10.00/20D	10.00/20	Ford	8–3.56x3.5	317	7.0	285	155–3900	5–2.6x5.7	Y	Ford	10	Ford	SB	H	** -7.17	Own	F4HV	485	729	a	PX	60.5	9x3x.25	L
36	CM804		116	156	24000	7900	10.00/20D	10.00/20	Ford	8–3.56x3.5	317	7.0	285	155–3900	5–2.6x5.7	Y	Ford	10	Ford	SB	H	** -7.17	Own	F4HV	485	729	a	PX	66.0	9x3x.25	L
37	M904		132	192	28000	8210	10.00/20D	11.00/20	Ford	8–3.56x3.5	317	7.0	285	155–3900	5–2.6x5.7	Y	Ford	10	Ford	SB	H	** -7.17	Own	F4HV	541	829	a	PX	60.5	9x3x.25	L
38	MH-610		159	193	24000	9547	10.00/20D	11.00/20	Her WXLC3	6–4¼x4¾	404	6.5	312	139–2600	7–2⅝x13¼	Y	MH610	10	MH610A	HyF	H	** -6.80	MH610	4HV	361	583	c	F	84	12¼x3x⅞	CTf
39	MH-615		159	193	26000	▲10158	10.00/20D	11.00/20	Her WXLC3	6–4¼x4¾	404	6.5	312	139–2600	7–2⅝x13¼	Y	MH615	10	MH615A	2S	H	** -8.43	MH615	BW4A	459	766½	c	F	84	12¼x3x⅞	CTf
40	MH-620		159	193	28000	▲10615	10.00/20D	11.00/20	Her RXLC	6–4⅝x5¼	529	6.0	408	146–2400	7–3½x13¼	Y	MH620	10	MH620A	2S	H	** -8.43	MH620	BW4A	459	766½	c	F	84	12¼x3x⅞	CTf
41	MH625		159	193	30000	▲11511	11.00/20D	12.00/20	Her RXLC	6–4⅝x5¼	529	6.0	408	146–2400	7–3½x13¼	Y	MH625	10	MH625	2S	H	** -8.59	MH625	4HV	650	1056	c	F	84	12¼x3x⅞	CTf
42	MH630		159	193	33000	▲11711	11.00/20D	12.00/20	Her RXLDH	6–4¾x5¾	558	6.0	440	180–2600	7–3½x13¼	Y	MH630	10	MH630	2SF	H	** -8.59	MH630	BW4A	650	1056	c	F	84	12¼x3x⅞	CTf
43	Oshkosh W-212		144	205	22000	▲ 8430	9.00/20D	9.00/20	Her JXLD	6–4x4½	339	...	272	130–3000	7–2¼x10⅜	Y	Own W-212	5	Own W212	HF	H	** -7.5	Own W212	T4IHDV	401	665	Co	TX	82	8x3x¼	Tf
44	W-314		150	205	25000	▲ 9650	10.00/20D	10.00/20	Con B6427	6–4⅞x4⅞	427	...	328	137–2600	7–2⅞x13½	Y	Own W-314	5	Own W314	HF	H	** -6.2	Own W314	T4IHDV	479	825	Co	TX	82	8¼x3x⅝	TF
45	W-414		150	205	28000	▲10150	10.00/20D	10.00/20	Con T6427	6–4⅞x4⅞	427	...	342	157–2600	7–2⅞x13½	Y	Own W-414	5	Own W414	HF	H	** -6.2	Own W414	T4IHDV	510	876	...	PX	82	8¼x3x⅝	TF
46	W1700		150	205	30000	▲11200	11.00/20D	12.00/20S	Her RXC	6–4⅝x5¼	529	...	410	145–2200	7–3x13¼	Y	Own W-1700	5	Own W1700	SF	H	** -6.4	Own 1700	T4IHDV	570	980	G	PX	82	8¼x3x⅝	TF
47	W-712		150	205	34000	▲12500	11.00/20D	12.00/20	Her RXLDH	6–4¾x5¾	558	...	462	190–2600	7–3½x13¼	Y	Own W-712	5	Own W712	2F	H	** -6.8	Own W712	L41HV	630	975	G	PX	82	10½x3x⅝	TF
48	(D) WA-906		160	205	40000	▲16000	13.00/20D	14.00/20S	CumHRBB-600	6–5½x6	743	...	505	180–2000	7–4½x16	Y	Own WA-906	12	Own WA906	2F	H	** -6.15	Own WA906	LT41A	645	1190	G	PX	90	10½x3x⅜	TF
49	W2211		160	205	42000	▲16500	13.00/20D	14.00/20S	Wau 145GKB	6–5¼x6	779	...	590	240–2400	7–3½x17¾	Y	Own W-2211	12	Own W2211	2F	H	** -6.15	Own W2211	LT41A	645	1190	G	PX	90	10½x3½x⅜	TF
50	W2206		160	205	54000	▲19000	13.00/24D	14.00/24	HS 400	6–5¼x7	●	...	730	195–2000	7–3¼x14	Y	Own W-2206	6	Own W2206	2F	H	** -6.3	Own W2206	LT41A	780	1190	G	PX	90	10½x3½x⅜	LF
51	(D) WA2208		160	205	42000	▲16900	13.00/20D	14.00/20S	Cum NHB-600	6–5½x6	743	...	535	200–2100	7–4½x16½	Y	OwnWA-2208	12	Own WA2208	2F	H	** -6.15	Own WA2208	LT41A	645	1190	G	PX	90	10½x3½x⅜	TF
52	(D) W2209		160	205	54000	▲19500	13.00/24D	14.00/24	Cum NHRS600	6–5½x6	743	...	800	300–2100	7–4½x16½	Y	Own W-2209	6	Own W2209	2F	H	** -6.30	Own W2209	LT41A	780	1190	G	PX	90	10½x3½x⅜	LF
53	Sterling HB1204		127	162	24000	▲10350	9.00/20	10.00/20	Wau 6MZA	6–4¼x4¾	404	5.6	290	130–3000	7–2⅝x12½	Y	Fu 5A431‡	10	T 72303DPH	2F	H	6.49–9.33	Tim F2090H	T4IHV	446	768	a	TX‡	67	9x3¼x¼	A
54	HA1304		160	178	26000	▲11000	10.00/20	11.00/20	Wau 6SRKR	6–4⅜x5½	517	5.5	369	125–2250	7–3x13½	Y	Fu 5A62●●	10	T 72303DPH	2F	H	6.49–9.33	Tim F2090H	T4IHV	446	768	a	TX‡	76	9x3¼x¼	A
55	HB1604		152	163	32000	▲12225	11.00/20	11.00/24	Wau 140GK	6–4½x5½	525	6.1	425	142–2250	7–3¼x15½	Y	Fu 5A62●●	10	Tim 1357W	2F	H	6.65–8.60	Tim F3110W	Ws4IA	644	984	a	TX‡	87	9¼x3⅝x⅜	A
56	▼▼HB1904		152	163	38000	▲14925	12.00/20	12.00/24	Wau 145GK▼▼	6–5¼x6	779	6.2	585	186–2000	7–3½x18	Y	Fu 4A86●●	8	Tim 1758W	2F	H	7.33–10.2	Tim F409CW	Ws4IA	644	984	a	TX‡	87	9¼x3⅝x⅜	A
57	HB2254		152	163	44000	▲16350	12.00/20	13.00/24	Wau 145GKB	6–5¼x6	779	6.2	595	222–2100	7–3½x18	Y	Fu 4A86●●	8	Tim 79721W	2F	H	7.66–10.2	Tim F409CW	Ws4IA	684	1032	a	TX‡	87	9¼x3⅝x⅜	A
58	(D) HB2254D		159	170	44000	▲16625	12.00/20	13.00/24	Cu NHBD600	6–5½x6	743	15	537	200–2100	7–4½x13⅜	Y	Fu 4A86●●	8	Tim 79721W	2F	H	7.66–10.2	Tim F409CW	Ws4IA	684	1032	a	TX‡	87	9¼x3⅝x⅜	A
59	Walter (e.f.) FZM		126	150	24000	9000	12.00/20S		Wau MZA	6–4¼x4¾	404	5.6	290	125–2600	7–2⅝x12½	Y	Own FJN	6	Own M8	2	H	** -8.00	Own FJ	O4IA	470	670	G	FI	84	12x3½x½	B
60	(e.f.) AEB		126	150	32000	13000	12.00/24S		Wau 140GZ	6–4⅜x5½	554	6.2	440	150–2250	7–3¾x14	Y	Own FC	6	Own FCC	2	H	** -9.00	Own FC	O4IA	585	800	G	FI	96	14x3¾x½	B
61	(e.f.) AGB		138	162	32000	14000	12.00/24S		Wau 145GK	6–5¼x6	779	6.2	585	185–2000	7–3½x17¾	Y	Own FA	6	Own FCC	2	H	** -9.00	Own FC	O4IA	585	800	G	FI	108	14x3¾x½	B
62	(e.f.) AGR		138	162	42000	15000	12.00/24D		Wau 145GK	6–5¼x6	779	6.2	585	185–2000	7–3½x17¾	Y	Own FA	6	Own FCR	2	H	** -9.00	Own FC	O4IA	585	800	G	FI	108	14x3¾x½	B
63	Ward La Fr. FD1				35000	▲11500	11.00/22	11.00/22	Cont 6513	6–4½x5¾	513	5.9	405	180–2800	7–3¼x14½	..	Ful 5A620	5	Tim R462W	S2	P	** -8.15	Tim F3100W	BW4IA	627	1029	Co	PM	.....	10x3x⅞	C
64	(D) FD2				35000	▲12000	11.00/24	11.00/24	Cum HB600	6–5½x6	672	17	500	150–1800	7–4½x16¾	..	Ful 5A920	5	Tim R462W	S2	R	** -8.15	Tim F3100W	BW4IA	627	1029	Co	PM	.....	10x3x⅞	C
65	Willys Jp. CJ-3B	1377	80	80	3500	*2191	6.00/16S	7.00/15S	Own CJ-3B	4–3⅛x4⅜	134	6.9	114	70–4000	3–2 33x5⅞	N	WG T90C	$6	Spi 44-2	Hy½	H	** -5.38	Spi 25	B4IH	118	198	a	...	.....	4x1¾x⅛	P
66	475-4WD	*1805	118	118	5300	*3115	7.00/16S	.....	Own 475	4–3⅛x4⅜	134	6.9	114	72–4000	3–2 33x5⅞	N	WG T90C	$6	Spi 53	H½	H	** -5.38	Spi 25	B4IH	176	276	a	...	42.28	5½x2x⅛	TD
	Six-Wheelers Wheels▼ Driven																														
	Corbitt																														
67	G302R34-4R		173		34500		8.25/20	9.00/20	Con B6427	6–4⅞x4⅞	427	5.9	325	127–2600	7–2⅞x13½	Y	Fu 5A430	5	Tim 1055	SdF	L	5.71–7.40	Tim 35000	Ws6IA	...	...	a	TX	88	8¼x3¼x⅞	TL
68	G402R40-4R		173		40000		9.00/20	10.00/20	Con T6427	6–4⅞x4⅞	427	6.3	336	151–2600	7–2⅞x13½	Y	Fu 5A620	5	Tim 1555	SdF	L	5.57–7.80	Tim 35000	Ws6IA	731	1058	a	TD	88	8¼x3¼x⅞	TL
69	D401R40-4R		173		40000		10.00/20		Cum JBS600	6–4⅛x5	401	...	345	150–2500	7–3⅞x...	Y	SP 6253	5	Tim 1555	SdF	L	5.57–7.80	Tim 35000	Ws6IA	731	1058	a	TD	88	8¼x3¼x⅞	TL
70	(T)(D)D808Q46-2R		136		46000		10.00/20	11.00/22	Cum HRBB600	6–5½x6	743	17	540	180–2000	7–4½x16½	Y	Fu 5C720	5	Tim R300	2F	H	4.93–5.91	Tim FE900	Ws6IA	1032	1578	a	2M	68	8x3¼x¼	TL
71	(D) D802R46-4R		188		46000		10.00/20	11.00/20	Cum HRB600	6–5½x6	743	17	540	165–1800	7–4½x16½	Y	Fu 10B1120	10	Tim SW3022	WF	L	4.71–6.17	Tim FE900	Ws6IA	1073	1554	a	TD	84	10x3¾x¼	TL

(Turn to Page 104, Please)

For Key to References and Abbreviations See Page 93

COMMERCIAL
Certify
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tion work
When tire
jobs, do '
You'll ge
Schrader
A. SCHRA
• GAUGE
flats give
accurate
the slow

You can predict flats on paper!

...proper tire maintenance will prevent them

• GAUGE AND RECORD the air pressure of all tires regularly. Most flats give a slow-leak warning signal that can *only* be found by accurate gauge readings. A comparison of readings will point out the slow leaks that you should fix to avoid costly roadside delays.

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8601 Valve and Tube Vulcanizer

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FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

(Continued from Page 102)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Speeds	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make Location Type Operation	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	Type
	Corbitt—Cont'd																														
1	(T)(D)D803V46-4R		189		46000		11.00/20		Cum NHB	6-5½x6	743	17.525	200-2100	7-4½x16½		Y	Fu 4B86	4	Tim SD3020	2dF	L	6.84-...	Tim Fe 900	Ws6IA	1073	1554	a	TD	65		TL
2	(T)(D)D803V60-4R		189		60000		11.00/20		Cum NHB	6-5½x6	743	17.525	200-2100	7-4½x16½		Y	Fu 10A1120	10	Tim SFD4600	2dF	L	8.07-...	Tim Fe 900	Ws6IA	1221	1762	a	TD	65		TL
3	(D)...D404X46-6		160		46000		11.00/20		Cum JBS600	6-4½x5	401	345	150-2500	7-3½x...		Y	Fu 5A62	10	Tim SD3020	2dF	L	** -9.16	Tim F3200	Ws6IA	1152	1684	a	TD			
4	(D)D404Y46-4R		160		46000		11.00/20		Cum JBS600	6-4½x5	401	345	150-2500	7-3½x...		Y	Fu 5A62	10	Tim SD3020	2dF	L	** -9.16	Tim 27063	Ws6IA	1082	1574	a	TD			
5	.....G402X46-6		160		46000		11.00/20		Con T6427	6-4¾x4½	427	6.3	336	151-2600	7-2½x13½	Y	Fu 5A43	10	Tim SD3020	2dF	L	** -9.16	Tim F3200	Ws6IA	1152	1684	a	TD			
6	Dodge...C-1-YX6	▲9097	154	190	40000	12200	10.00/20D	10.00/20	Own T-353	6-4⅛x5½	413	6.5	343	171-3200	7-3x11.24	Y	Cla 290V2	5	T SD3010	ASF	L	** -8.27	Tim FD900	TD6IA	912	1262	c	TX	84	10½x3⅛x½	CC
7	Duplex.....TH6		162	220	30000	9180	8.25/20	9.00/20	Her JXD	6-4x4½	320	6.2	240	113-3000	7-2½x10	Y	Fu 5B33‡	10	Tim SBD1055	BF	L	**-6.16	Tim 32502H	L6IHV	513	839	a	TX	83⅛	9½x3½x⅜	L
8	.....RH-6		160	208	40000	11500	10.00/20	11.00/20	Her WXLC3	6-4½x4¾	404	5.8	312	139-2600	7-2⅝x13⅛	Y	Fu 5A43	5	Tim SD3010	2F	R	8.27	Tim FD900	WS61A	1075	1525	a	TX	73⅛	10½x3⅛x⅜	L
9	(D).....L6		172	208	45000	15000	11.00/20	12.00/20	Cum HB600	6-4⅞x6	672	17.495	150-1800	7-4½x16⅛		Y	Fu 5A920	5	Tim SD454	SF2	L	6.8-8.15	Tim FE900	Ws6IA	1137	1625	a	TX	77⅝	10⅛x3½x½	L
10	Federal.....6554		189	225	45000	14950	10.00/20	11.00/20	Con R6602‡‡	6-4⅞x5⅜	602	6.4	480	205-3000	7-3¼x14½	Y	Fu 5A65▼	15	T SW3456†	WF	R	** -6.16	Tim FE900	Ws6IA	1082	1569	a	TD	108	10½x3½x⅜	TfL
11	6654		189	225	60000	16930	11.00/22	12.00/20	Con R6602‡‡	6-4⅞x5⅜	602	6.4	480	205-3000	7-3¼x14½	Y	Fu 5A65▼	12	Tim SFD4600	WF	R	** -7.6	Tim 27452W	Ws6IA	1308	1888	a	TD	108	10½x3½x⅜	TfL
12	2952		160	196	34000	9810	9.00/20	9.00/20	Her JXDF	6-4x4¼	320	6.5	254	125-3200	7-2½x10	Y	Cla 205V‡‡△	10	TSBD1555dph	SF	R	7.53 10.35	Tim 32514H	LT61HV	544	914	a	TX	84	9½x3½x⅜	TL
13	3052		160	196	34000	9845	9.00/20	9.00/20	Her JXLDF	6-4x4½	339	6.5	288	142-3200	7-2½x10	Y	Cla 205V‡‡△	10	TSBD1555dph	SF	R	7.53 10.35	Tim 32514H	LT61HV	544	914	a	TX	84	9½x3½x⅜	TL
14	3452		160	196	34000	10630	9.00/20	9.00/20	Con T6371F	6-4½x4⅛	371	6.4	297	145-3000	7-2½x13½	Y	Cla 290V▲	10	TSBD1555dph	SF	R	8.33 11.47	Tim FD900	LT61HV	752	1132	a	TX	84½	10½x3½x⅜	TL
15	4551		167	215	44000	12515	10.00/20	11.00/20	Con T6427‡‡	6-4⅞x4½	427	6.4	350	166-3000	7-2½x13½	Y	Cla 290V	5	T-SD3020P♦	2dF	R	** -9.16	Tim FD900	Ws6IA	1073	1550	a	TD	84½	10½x3½x⅜	TfL
16	2953		160	196	36000	9620	9.00/20	9.00/20	Her JXDF	6-4x4¼	339	6.5	254	125-3200	7-2½x10	Y	Cla 205V	5	TSFD 157	DR	R	7.66-...	Tim 32514	LT61HV	660	1338	a	TA	84	9½x3½x⅜	TL
17	3053		160	196	36000	9675	9.00/20	9.00/20	Her JXLDF	6-4x4½	339	6.5	288	142-3200	7-2½x10	Y	Cla 205V	5	TSFD 157	DR	R	7.66-...	Tim 32514	LT61HV	660	1338	a	TX	84	9½x3½x⅜	TL
18	2954		160	196	38000	9970	9.00/20D	9.00/20	Her JXDF	6-4x4¼	320	6.5	254	125-3200	7-2½x10		Cla 205V	5	Tim SFD157	DR	R		Tim 32514	DHT6	660	1338		TD	84	9½x3½x⅜	
19	3054		160	196	38000	10005	9.00/20D	9.00/20	Her JXLDF	6-4x4½	339	6.5	288	142-3200	7-2½x10		Cla 205V	5	Tim SFD157	DR	R		Tim 32514	DHT6	660	1338		TD	84	9½x3½x⅜	
20	3454		160	196	38000	10790	9.00/20D	9.00/20	Con T6371F	6-4½x4⅛	371	6.4	297	145-3000	7-2½x10		Cla 290V	5	Tim SFD157	DR	R		Tim FC900	DHT6	660	1338		TD	84	9½x3½x⅜	
21	4554		179	215	44000	12765	10.00/20D	11.00/20	Con T6422F	6-4⅞x4⅞	427	6.4	350	166-3000	7-2½x13½		Cla 290V	5	Tim SD3020	DR	R		Tim FE900	DHT6	1054	1550		TX	84	10½x3½x⅜	TL
22	(D).....D6501		150	209	40000	11890	11.00/22D	12.00/20	Con R6602F	6-5½x6	743	6.4	480	200-2100	7-4½x13⅝		Ful 5A658	5	Tim U200	SF	R		Tim FE900	LT4IVH	722	1051		TX	60½	10½x3½x⅜	TL
23	(D).....D6502		150	209	40000	12040	11.00/22D	12.00/20	Con R6602F	6-5½x6	743	6.4	480	200-2100	7-4½x13⅝		Ful 5A658	5	Tim U300	dF	R		Tim FE900	LT4IVH	722	1051		TX	60½	10½x3½x⅜	TL
24	FWD.....6-300		148	Opt	30000	▲13200	8.25/20D	10.00/20	Wau 195GKA	6-4½x4¼	320	6.2	243	125-3200	4-2⅝x7⅛	Y	Own 25	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHV	673	1130	a	T6	84	9¼x3x⅜	TF
25	6-322		148	Opt	32000	▲13600	8.25/20D	10.00/20	Wau 135GKB	6-4¼x5	426	6.3	337	148-2800	7-3¼x14	Y	Own 25	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHV	673	1130	a	T6	84	9¼x3x⅜	TF
26	6-323		148	Opt	32000	▲13600	8.25/20D	10.00/20	Wau 135GZB	6-4⅜x5	451	6.3	354	153-2800	7-3¼x14	Y	Own 25	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHV	673	1130	a	T6	84	9¼x3x⅜	TF
27	6-364		148	Opt	36000	▲14000	9.00/20D	10.00/20	Wau 140GK	6-4½x5½	525	6.4	420	160-2400	7-3¼x13⅜	Y	Ful 5C65	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6	84	9¼x3x⅜	TF
28	6-365		148	Opt	36000	▲14000	9.00/20D	10.00/20	Wau 140GKB	6-4½x5½	525	6.4	425	172-2600	7-3¼x13⅜	Y	Ful 5C65	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6	84	9¼x3x⅜	TF
29	(D).....6-364D		148	Opt	36000	▲14250	9.00/20D	10.00/20	GMC 4-71	6-4¼x5	284	16	400	150-2100	5-3½x5⅝	Y	Ful 5C65	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6	84	9¼x3x⅜	TF
30	(D).....6-368D		148	Opt	36000	▲14250	9.00/20D	10.00/20	CumHRBB-600	6-5½x6	743	16	505	180-2000	7-4½x...	Y	Ful 5C72	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6	84	9¼x3x⅜	TF
31	6-406		148	Opt	40000	▲14500	10.00/20D	10.00/20	Wau 140GZB	6-4⅜x5½	554	6.4	448	188-2600	7-3¼x13⅜	Y	Ful 5C65	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6	84	9¼x3x⅜	TF
32	(D).....6-406D		148	Opt	40000	▲15200	10.00/20D	10.00/20	GMC 6-71	6-4¼x5	426	16	600	200-2000	7-3½x7⅛	Y	Ful 5A1120	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6	84	9¼x3x⅜	TF
33	(D).....6-409D		148	Opt	40000	▲15500	10.00/20D	10.00/20	Cum NHB-600	6-5½x6	743	16	535	200-2100	7-4½x...	Y	Ful 5C720	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6	84	9¼x3x⅜	TF
34	.....G6-405		184½	184½	40000	▲14650	10.00/20D	10.00/20	Wau 140GKB	6-4½x5½	525	6.4	425	172-2600	7-3¼x13⅜	Y	Ful 5C65	10	Own 6-23	SF	L	** -5.28	Own 22	Wg6IHA	673	1130	a	T6		9¼x3x⅜	TF
35	.....L6-408		217	217	40000	▲14950	10.00/22D	10.00/22	Wau 145GK	6-5¼x6	779	6.2	595	216-2100	7-3½x17¾	Y	Ful R95C	20	Own 6-23	SF	L	** -5.28	Own 22	Wg6IA	1008	1451	a	T6		9¼x3x⅜	TF
36	(D).....L6-406D		217		40000	▲15300	10.00/22D	10.00/22	GMC 6-71	6-4¼x5	426	16	600	200-2000	7-3½x7⅛	Y	Ful R95C	20	Own 6-23	SF	L	** -5.28	Own 22	Wg6IA	1008	1451	a	T6		9¼x3x⅜	TF
37	(D).....L6-409D		217		40000	▲15450	10.00/22D	10.00/22	Cum NHB-600	6-5½x6	743	16	535	200-2100	7-4½x...	Y	Ful R95C	20	Own 6-23	SF	L	** -5.28	Own 22	Wg6IA	1008	1451	a	T6		9¼x3x⅜	TF
38	6-609		192		60000	▲17500	12.00/20D	12.00/20	Wau 145GKB	6-5¼x6	779	6.2	595	240-2400	7-3½x17¾	Y	Own 55	10	Own 6-33	SF	L	** -6.14	Own 32	Wg6IA	1234	1885	a	T6		10x3x⅛	C
39	(D).....6-606D		192		60000	▲17850	12.00/20D	12.00/20	GMC 6-71	6-4¼x5	426	16	600	200-2000	7-3½x7⅛	Y	Own 55	10	Own 6-33	SF	L	** -6.14	Own 32	Wg6IA	1231	1885	a	T6		10x3x⅛	C
40	(D).....6-609D		192		60000	▲18000	12.00/20D	12.00/20	Cum NHB-600	6-5½x6	743	16	535	200-2100	7-4½x...	Y	Own 55	10	Own 6-33	SF	L	** -6.14	Own 32	Wg6IA	1234	1885	a	T6		10x3x⅛	C
41	Kenworth (D)•522		191	255	42000	14250	10.00/20	11.00/22	Cum HRB-600	6-5½x6	743	16	540	165-1800	7-4½x16⅛	Y	BL 8241	4	T U200PA♦†	2F	H	5 91-9 76	Tim FE900N	Ws4IA	880	1368	a	TD	100	9¼x3½x⅛	C
42	(D)...•523.4R		190	255	42000	15500	10.00/20	11.00/22	Cum HRB-600	6-5½x6	743	16	540	165-1800	7-4½x16⅛	Y	BL 8241	4	Tim SQW	WF	L	5.67-8.20	Tim FF900N	Ws4rIA	868	1400	a	TD	99	9¼x3¼x⅛	C
43	(D)...•524.4R		190	255	60000	16500	10.00/20	11.00/22	Cum HRB-600	6-5½x6	743	16	540	165-1800	7-4½x16⅛	Y	BL 8241	4	Tim SW456P	WF	L	4.72-8.20	Tim FF900N	Ws4rIA	1016	1556	a	TD	99	9¼x3¼x⅛	C
44	(D)...548.4R		201		65000	20150	11.00/22	12.00/24	Cum HRB-600	6-5½x6	743	16	540	165-1800	7-4½x16⅛	Y	BL 8241	4	SFD-4600	B2F	L	8.07-11.6	TimFe900DPA	Ws6rIA	1080	1785	a	TD	112¼	9¼x3¼x⅛	DB
45	(D)...552.6		178		54000	22500	13.00/24	13.00/24	Cum HRB-600	6-5½x6	743	16	540	165-1800	7-4½x16⅛	Y	BL 8241	4	Tim SFD4600	B2F	L	8.07-11.5	Tim F3200W	Ws6rIA	1180	1886	a	TD	111	9¼x3¼x⅛	DB
46	(D)...•825.4R		190	255	42000	14810	10.00/20	11.00/22	Cum HRB-600	6-5½x6	743	16	540	165-1800	7-4½x16⅛	Y	BL 8241	4	Ti GSWQFR2	WF	L	5.67-8.20	Tim FE900N	Ws4rIA	1016	1556	a	TD	99	9¼x3¼x⅛	C
47	.....829.4R		175½	255	42000	14300	10.00/20	11.00/22	LeR H540	8-4½x4¼	540	6.7	460	200-2600	7-3x13	Y	Fu 5C650	5	Tim SQD	B2F	L	5.78-9.21	Tim FE900N	Ws4rIA	868	1400	a	TD	93	9¼x3¼x⅛	C
48	(D).....848.4R		210½	234½	64000	12500	11.00/22	14.00/24	Cum HRB600	6-5½x6	743	16	540	165-1800	7-4½x16⅛	Y	BL-8241▲	4	Tim SFD4600	B2F	L	8.07-11.6	TimFE900DPA	Ws6rIA	1080	1785	a	TD	118¾	Variable	C
49	(D).....849-4R				66000		12.00/24																Tim 27436W								
50	(D).....*850-4R																														
	Marmon-Herr																														
51	.....M-756		156	216	35000	10200	9.00/20D	10.00/20	Ford	8-3.56x3½	279	7.0	244	145-3800	5-2⅝x5¾	Y	Ford	10	Ford	H	H	** -7.2	Own	F6HV	772	1161	a	PX	84½	9x3x¼	L
52	.....CM-756		140	180	35000	10250	9.00/20D	10.00/20	Ford	8-3.56x3½	279	7.0	244	145-3800	5-2⅝x5¾	Y	Ford	10	Ford	H	H	** -7.2	Own	F6HV	772	1161	a	PX	90	9x3x¼	L
	Oshkosh																														
53	.....W712-6X6		178	Opt	45000	▲17400	11.00/20D	12.00/20	Her RXLDH	6-4¾x5¼	558	...	462	190-2600	7-3½x13¼	Y	Own W712-6x6	10	Tim SD-3020	2F	L	** -6.1	Own W-712	LT6IA	1156	1889	...	PX	110	10¾-3½-⅜	B
54	.....**W1602		Opt	Opt	95000		14.00/24D	14.00/24	Optional								△		Tim SD472	2F	L		Own WA-1602	LT6IA		2217		Opt	Opt	12⅜-3½-⅜	B
55	.....**WA1600		Opt	Opt	60000		11.00/24D	12.00/24	Optional								△		Tim SFD4600	2F	L		Own WA-1600	LT6IA	1156	1189	...	Opt	Opt	12⅜-3½-⅜	B
56	Peterbilt (D)..350		193	Opt	36000		10.00/20D	11.00/22	Cum NHB600	6-5½x6	743	17.500	200-2100	7-4½x16½		Y	Spi 8041	12	Tim SW-3456	WF	R	6.16-6.80	TimFe900DPA	Ws6IA	1125	1569	...	TD	99½	10⅜x3½x⅛	CT
57	(D).....360		198	Opt	36000		10.00/20D	11.00/22	Cum NHB600	6-5½x6	743	17.500	200-2100	7-4½x16½		Y	Spi 8041	12	Tim SW-459	WF	R	6.16-6.80	TimFe900DPA	Ws6IA	1005	1517	...	TD	104⅞	10⅜x3½x⅛	CT
58	(D).....370		198	Opt	44000		10.00/20D	11.00/22	Cum NHB600	6-5½x6	743	17.500	200-2100	7-4½x16½		Y	Spi 8041	12	Tim SW-459	WF	R	6.16-6.80	T 27463	Ws6IA	1084	1626	...	TD	104⅞	10⅜x3½x⅛	CT
59	(D).....380		194	Opt	44000		10.00/20D	11.00/22	Cum NHB600	6-5½x6	743	17	500	200-2100	7-4½x16½	Y	Spi 8041	12	Tim SFD4600	2F	R	**-10.16	T 27463	Ws6IA	1084	1626	...	TD	98½	10⅜x3½x⅛	CT
60	(D).....390		197	Opt	79000		12.00/24	14.00/24	Cum NHB600	6-5½x6	743	17	500	200-2100	7-4½x16½	Y	Spi 8041	12	Tim SD472W	2F	R	**-10.16	T 27463	Ws6IA	1622	2215	...	TD	103½	10⅜x3½x⅛	CT
61	(D).....350(coe)		135	Opt	36000		10.00/20	11.00/22	Cum NHB600	6-5½x6	743	17	500	200-2100	7-4½x16½	Y	Spi 8041	12	SW 3456	WF	R	6.16-6.80	TimFe900DPA	W-61A	1125	1569	...	TD	93⅛	10⅜x3½x⅛	CT
62	(D).....360(coe)		135	Opt	36000		10.00/20	11.00/22	Cum NHB600	6-5½x6	743	17	500	200-2100	7-4½x16½	Y	Spi 8041	12	SW 459	WF	R	6.16-6.80	TimFe900DPA	W-61A	1005	1517	...	TD	93⅛	10⅜x3½x⅛	CT
63	Reo.....F-226		150	203	40000	9785	9.00/20	10.00/20	Own 331♦	6-3⅞x4⅛	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim SFD157	F2	T	6.41-7.66	Tim FD900	T6IVH	806	1134	var	TX	85⅝	9½x3⅛x⅛	Tf
64	.....F-506		150	203	40000	10000	9.00/20	10.00/20	Own 160	6-4½x4½	331	6.7	290	160-3200	7-2¾x9⅛	Y	Cla 265V	5	Tim SFD-157	F2	T	7.66-9.33	Tim FD900	T6IVH	806	1134	var	TX	85⅝	9½x3⅛x⅛	TF
65	.....F-236		169	200	45000	12145	10.00/20	11.00/20	Con T6427	6-4⅛x4⅞	427	6.4	348	163-2800	7-2¾x12.1	Y	Cla 290V	5	Tim SFD3020	F2	T	7.5	Tim FE-900	TWs6IA	934	1570	var	TD	104⅝	9½x3⅛x⅛	TfB
66	.....F-236-D		169	200	45000	12835	10.00/20	11.00/20	Cum JBS 600•	5-4½x5	401	15.360	150-2500	7-3¼x7.8	4	Cla 292VO	5	Tim SFD3020	F2	T	7.5 -...	Tim FE900	TWs6IA	934	1570	var	TD	104⅝	9½x3⅛x⅛	TfB
67	.....F-226-M		150	203	45500	11195	11.00/20†	11.00/20†	Own 331♦‡	6-3⅞x4⅛	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim SFD157	F2	T	** -9.33	Tim 27461	TWs6IA	938	1570	var	TD	85⅝	9½x3⅛x⅛	TfL
68	.....F-226 (6x6)		150	203	40000	11440	9.00/20	10.00/20	Own 331♦‡	6-3⅞x4⅛	331	6.4	264	140-3200	7-2½x9.408	Y	Cla 205V	5	Tim SFD157	F2	T	** -7.66	Tim F-2090	TWs6IA	1008	1361	var	TD	90	9½x3⅛x⅛	TL
69	.....F-536-M		155	200	50000	12140	11.00/20†	11.00/22†	Own 160	6-4½x4¼	331	6.7	290	160-3200	7-2¾x9⅛	Y	Cla 265V	5	Tim SFD3020	F2	T	** -9.21	Tim 27461	TWs6IA	962	1570	var	TD	122	9½x3⅛x⅛	TfL
70	Sterling...HA1605		164	235	32000	▲12400	9.00/20	10.00/20	Wau 6MZA	6-4¼x4¾	404	5.6	290	130-3000	7-2½x12½	Y	Fu 5A43	5	T SBD1555P‡	SF	L	6.80-13.1	T FD900DPA	Ws6IA	786	1138	a	TX	83	9x3¼x¼	A
71	.....HA1805		164	235	36000	▲13100	10.00/20	11.00/20	Wau 6MZA	6-4¼x4¾	404	5.6	290	130-3000	7-2½x12½	Y	Fu5A43-3A65	15	Tim SD3020P	2F	L	6.84-10.2	T FD900DP	Ws6IA	954	1554	a	TX♦	83	9x3¼x¼	A
72	.....HB2205		168	231	44000	▲14550	11.00/20	11.00/22	Wau 140GK	6-4½x5½	525	6.1	425	142-2250	7-3¼x15½	Y	Fu5A62-3A65	15	Tim SD3020P	2F	L	6.84-10.2	T FE900DPA	Ws6IA	934	1554	a	TX♦	92	9¼x3⅝x⅜	A

(Turn to Page 106, Please)

For Key to References and Abbreviations See Page 93

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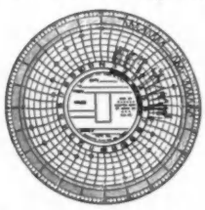
"Tachographs...

...are essential equipment and are installed on every one of our 225 vehicles."

— says: R. J. Davis, Vice President
Sprout & Davis, Inc., Whiting, Ind.

Take the advice of R. J. Davis of Sprout & Davis, Inc. —he knows from experience that Tachographs are essential for maximum road safety and profitable vehicle performance. Year after year more and more safety-minded over-the-road haulers rely on the accurate trip information Tachographs provide. You can gain these same benefits by installing a Tachograph in the cab of every vehicle in your fleet.



Each day a chart is placed in the Tachograph. A permanent record is registered on this chart giving such vital operational information as:

- When engine started
- How long engine idled
- When vehicle was in motion
- How fast vehicle traveled
- When vehicle stopped
- Distance traveled between stops

Tachographs are precision engineered for accurate recording. Housed in a durable aluminum case, they may be mounted right on the dash and connected directly to the speedometer cable. Clock face, speedometer, and odometer are illuminated for added convenience. Instruments are available in two types: MPH and RPM. Be "profit-dollars" ahead with the savings Tachographs make possible in fuel, time, and general maintenance costs. Full details are available in Wagner Bulletin SU-3. Mail coupon below for your free copy, today. No obligation of course.

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Sprout & Davis, Inc. drivers like using Tachographs. They have no trouble correctly inserting the charts and they like the ease of reading the illuminated clock, speedometer, and odometer. The red warning signal indicator also helps our drivers maintain a 45 M.P.H. speed limit for greater road safety.

Tachographs are essential equipment and are installed on every one of our 225 vehicles because they accurately record the facts we want to know.

Sincerely yours,

R. J. Davis
Vice President

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(NUMBER)

844-2

(Continued from Page 104)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES Standard Front and Rear	TIRE SIZES D-dual rear S-single rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Diameter and Length	Governor Standard	TRANSMISSION Make and Model	Forward Speeds	REAR AXLE Make and Model	REAR AXLE Gear and Type	REAR AXLE Drive & Torque	REAR AXLE Gear Ratio in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operation	BRAKES SERVICE Lining Area	BRAKES SERVICE Drum Area	BRAKES SERVICE Drum Material	BRAKES Hand Location Type	C.A Dimensions (Min. Std. W. B.)	FRAME Slide Rail Dimensions	FRAME C	FRAME Type
1	Sterling—Cont'd																																
2	▼▼HB2755		168	231	55000	*15850	11.00/24		12.00/24	Wau 140CKB▼▼	6–4½x5½	5256	4	425 172–2700	7–3¼x15½		Y	Fu5A62-3A65	15	Tim SW456P	WF	L	5 67–8	20	Tim 27462W	W61A	1164	1892a		TX◆	92	9½x33½x¾	A	
3	▼▼HB2755		168	231	62000	*17650	11.00/24		12.00/24	Cum NHB600	6–5½x6	743	15	537 200–2100	7–4½x13½		Y	Fu4A86-3A92	12	Tim SW456P	WF	L	5 67–8	20	Tim 27462W	W61A	1164	1892a		TX◆	92	9½x33½x¾	A	
4	(D) HB2105D		188	251	42000	*16250	10.00/20		11.00/20	Cum NHB600	6–5½x6	743	15	537 200–2100	7–4½x13½		Y	Fu4A86-3A92	12	Tim SW3012P	WF	L	4 71–6	17	Tim FE900DP	W61A	934	1554a		TX◆	92	9¾x3¾x¾	A	
5	(D) TA2115D		188	251	42000	*16375	11.00/20		11.00/22	Cum NHB600	6–5½x6	743	15	537 200–2100	7–4½x13½		Y	Fu4A86-3A92	12	Tim SW3012P	WF	L	4 71–6	17	Tim FE900DP	W61A	934	1554a		TX◆	92	9¾x3¾x¾	A	
6	▼▼HB2756		168	231	55000	*16750	11.00/24		12.00/24	Wau 140GK▼▼	6–4½x5½	5256	4	425 172–2700	7–3¼x15½		Y	Fu5A62-3A65	15	Own 196W	CD	R	6 04–7	31	T FE900DFA	W61A	1054	1782a		TX◆	92	9¾x33¾x¾	A	
7	▼▼HB2756		168	231	55000	*17000	11.00/24		12.00/24	Wau 140GK▼▼	6–4½x5½	5256	4	425 172–2700	7–3¼x15½		Y	Fu5A62-3A65	15	Own 230W	CD	R	6 04–7	31	Tim 27462W	W61A	1280	1988a		JX	92	9¾x33¾x¾	A	
8	(D) HB3506D		181	192	60000	*20000	11.00/24		12.00/24	Cum HBD600	6–5½x6	672	17	495 150–1800	7–4½x13⅜		Y	Fu4A86-3A92	12	Own 320W	CD	R	10 4–13	2	Tim 27462W	W61A	1280	1988a		JX	92	9¾x33¾x¾	AL	
9	(D) HB3506D		181	192	70000	*23750	12.00/24†		13.00/24†	Cum HBD600	6–5½x6	672	17	495 150–1800	7–4½x13⅜		Y	Fu4A86-3A92	12	Own 330W	CD	R	10 4–13	2	Tim 27462W	W61A	1280	1988a		JX	92	9¾x33¾x¾	AL	
10	(D) HB4506D		181	192	90000	*27300	14.00/24†		14.00/24†	Cu NHBD600	6–5½x6½	743	15	537 200–2100	7–4½x13⅜		Y	F4A112-3A92	12	Own 340W	CD	R	** –11	39	Shw FE18A34	W61A	1238	1988a		JX	140	11x18½x¾	AL	
11	(D) SF6506D		190	190	130000	*44500	16.00/24‡		16.00/24‡	Bu 8DA1125	8–5¼x6½	●●	13	855 287–2100	9–3¾x21⅛		Y	F4A112-3A92	12	Own 500W	CD	R	** –14	88	Tim FU900P	W61A	2066	2748a		JX	140	15x18½x¾	AL	
12	(D) SF6506D		190	190	150000	*46500	18.00/24‡		18.00/24‡	Bu 8DA8112S	8–5¼x6½	●●	13	980 350–2100	9–3¾x21¼		Y	F4A112-3A92	12	Own 500W	CD	R	** –14	88	Tim FU900P	W61A	2066	2748a		JX	140	15x18½x¾	AL	
13	(C) C6103		160	229	30000	7650	7.50/20		9.00/20-10	Chev.	6–3¼x3⅞	235	7	120 108–3500	4–3¼ Chev.		Y	F4A112-3A92	12	Chev.	HyF	R	** –6	17	Chev.	C61HV	607	930	Co	TIX	83	9¼x33½			
14	Truckstell																																
15	(C) F700 4R		152	221	28000	7960	7.50/20		8.25/20	Ford	6–3⅞x4⅛	239	6	81 94 106–3500	3–2¾x12 7/8			Ford ◆◆	12	Ford	HF	R	** –6.8	20	Tim FD900	F61HV	755	1169	Co	TX	82	9¼x33x½			
16	(C) F750 4R		153	225	32000	8980	7.50/20		9.00/20	Ford	6–3¾x4	424	6	82 112–3500	4–2¾x13⅜			Ford ◆◆	12	Ford	HF	R	** –7.2	20	Tim FD900	F61HV	755	1169	Co	TX	82	9¼x33x½			
17	(C) F800 4R		153	225	34000	9350	8.25/20		9.00/20	Ford	6–3¾x4⅜	477	6	92 127–3800	5–2¾x15			Ford ◆◆	15	Ford	HF	R	** –7.2	20	Tim FD900	F61HV	755	1169	Co	TX	82	9¼x33x½			
18	(C) F900 4R		153	225	40000	10170	9.00/20		10.00/20	Ford	6–3⅞x4½	527	6	99 127–3900	5–2¾x15			Ford ◆◆	15	Ford	SF	R	** –7.17		Ford	✦✦	856	1231	Co	TX	82	9¼x33x 65			
19	(C) C5403 4R		126	204	28000	7800	7.50/20		9.00/20	Chev.	6–3¾x3½	2356	7	193 105–3600	4–8t. Chev.			Chev. ◆◆	12	Chev.	SF	R	** –6	17	Chev.	C61HV	950	1370	Co	TX	82	9¼x33x 65			
20	(C) C6103 4R		160	229	30000	7650	7.50/20		9.00/20-10	Chev.	6–3¼x3⅞	235	7	120 108–3500	4–8t. Chev.			Chev. ◆◆	12	Chev.	HyF	R	** –6	17	Chev.	C61HV	607	930	Co	TIX	83	9¼x33½			
21	Ward La Fr. DTT																																
22	(C) F700 4R		180	220	39500		10.00/20		11.00/20	Con T6427	6–4¼x4⅜	427		340 162–2600				Fu 5A43◆◆	15	Tim SD3010P	2F	L	** –6	27	Tim FD900	T41A				D		10x31½x¼		
23	DST		180	220	39500		10.00/20		11.00/20	Con R6572	6–4¼x5½	572		410 198–2600				Fu 5C52◆◆	15	Tim SD3010P	2F	L	** –7	50	Tim FD900	T41A				D		10x31½x¼		
24	(C) F750 4R		153	225	34000	9350	8.25/20		9.00/20	Con R6602	6–4¼x5½	602		463 196–2400				Fu 5C72◆◆	15	Tim SD3010P	2F	L	** –7	84	Tim FE900	T41A				D		10x31½x¼		
25	(C) F800 4R		153	225	40000	10170	9.00/20		10.00/20	Cum HBD600	6–5½x6	743		540 165–1800				Fu 5C72◆◆	15	Tim SD3010P	2F	L	** –6	84	Tim FE900	T41A				D		10x31½x¼		
26	(C) F900 4R		153	225	48000	11640	10.00/20		11.00/20	Cum HBD600	6–5½x6	743		540 200–2100				Fu 5C72◆◆	15	Tim SD3010P	2F	L	** –6	17	Tim FE900	T41A				D		10x31½x¼		
27	(C) C5403 4R		126	204	28000	7800	7.50/20		9.00/20	Cum NHB600	6–5½x6	743						Fu 5C72◆◆	15T	8W3012PA	WF	L											
28	(C) C6103 4R		160	229	30000	7650	7.50/20		9.00/20-10	Chev.	6–3¼x3⅞	235	7	120 108–3500	4–8t. Chev.			Chev. ◆◆	12	Chev.	HyF	R	** –6	17	Chev.	C61HV	607	930	Co	TIX	83	9¼x33½			
29	White-Freightliner																																
30	(c.o.e.) WF64		178			13500	10.00/22			Cum NHB	6–5½x6	743	13	575 200–2100	7–4½x16½		Y	Spl 8011			WF	H	** –6	00	Tim 27061	O4rIA	966	1450a		TD	136	10½x33½x¼	D	
31	(c.o.e.) WF64T		156			13800	10.00/22			Cum NHB	6–5½x6	743	13	575 200–2100	7–4½x16½		Y	Fu 10B1120			WF	H	** –6	00	Tim 27061	O4rIA	966	1450a		TD	94	10½x33½x¾	DL	

For Key to References and Abbreviations See Page 93

Fleet Training Courses

FLEET training courses have shown themselves an excellent source of trained personnel and a good way to keep up-to-date on latest techniques in fleet safety, maintenance and operation. For your convenience, here is a calendar of courses scheduled for 1954 together with the address to write to for further information. Unless otherwise noted, courses are full time day courses.

FEBRUARY

8-12—Vehicle Maintenance Course—Center for Continuation Study, University of Minnesota, Minneapolis 14, Minn.

15-19—Vehicle Maintenance Course—University of Denver, Denver, Colo.

19-20—Michigan Trucking Assn. Speech Conference—Continuing Education Dept., Michigan State College, East Lansing, Mich.

22-26—Fleet Supervisor Training Course—Dept. of Engineering, University of California, Los Angeles 24, Cal. (Evening).

22-Mar. 20—Truck Driver Training School—College Extension Division, North Carolina State College, Raleigh, N. C.

23-26—Vehicle Maintenance Course—Dept. of Engineering, University of California, Los Angeles 24, Cal.

MARCH

1- 5—Fleet Supervisor Training Course—Rm. 114, Bldg. T-11, University of California, Berkeley 4, Cal. (Evening).

1- 5—Vehicle Maintenance Course—Rm. 114, Bldg. T-11, University of California, Berkeley 4, Cal. (Tentative).

8-12—Dispatchers and Warehouse Foremen Training Course—Continuing Education Dept., Michigan State College, East Lansing, Mich.

15-19—Fleet Supervisors Training Institute—Short Courses and Conferences Dept., University of Oklahoma, Norman, Okla.

15-19—Vehicle Maintenance Course—University of Toronto, Toronto, Ontario, Canada.

18-May 20—Vehicle Maintenance Course—Continuing Education Dept., Michigan State College, East Lansing, Mich. (To be held in Detroit, once a week, evenings.)

22-24—Motor Vehicle Maintenance Conference—Dept. of Civil Engineering, University of Washington, Seattle 5, Wash.

22-Apr. 2—Administration and Techniques of Accident Investigation—Traffic Management Institute, Northeastern University, Boston, Mass.

22-Apr. 17—Truck Driver Training School, College Extension Division, North Carolina State College, Raleigh, N. C.

29-Apr. 2—Basic Motor Vehicle Fleet Supervisors Training Course—Dept. of Civil Engineering, Oregon State College, Corvallis, Ore.

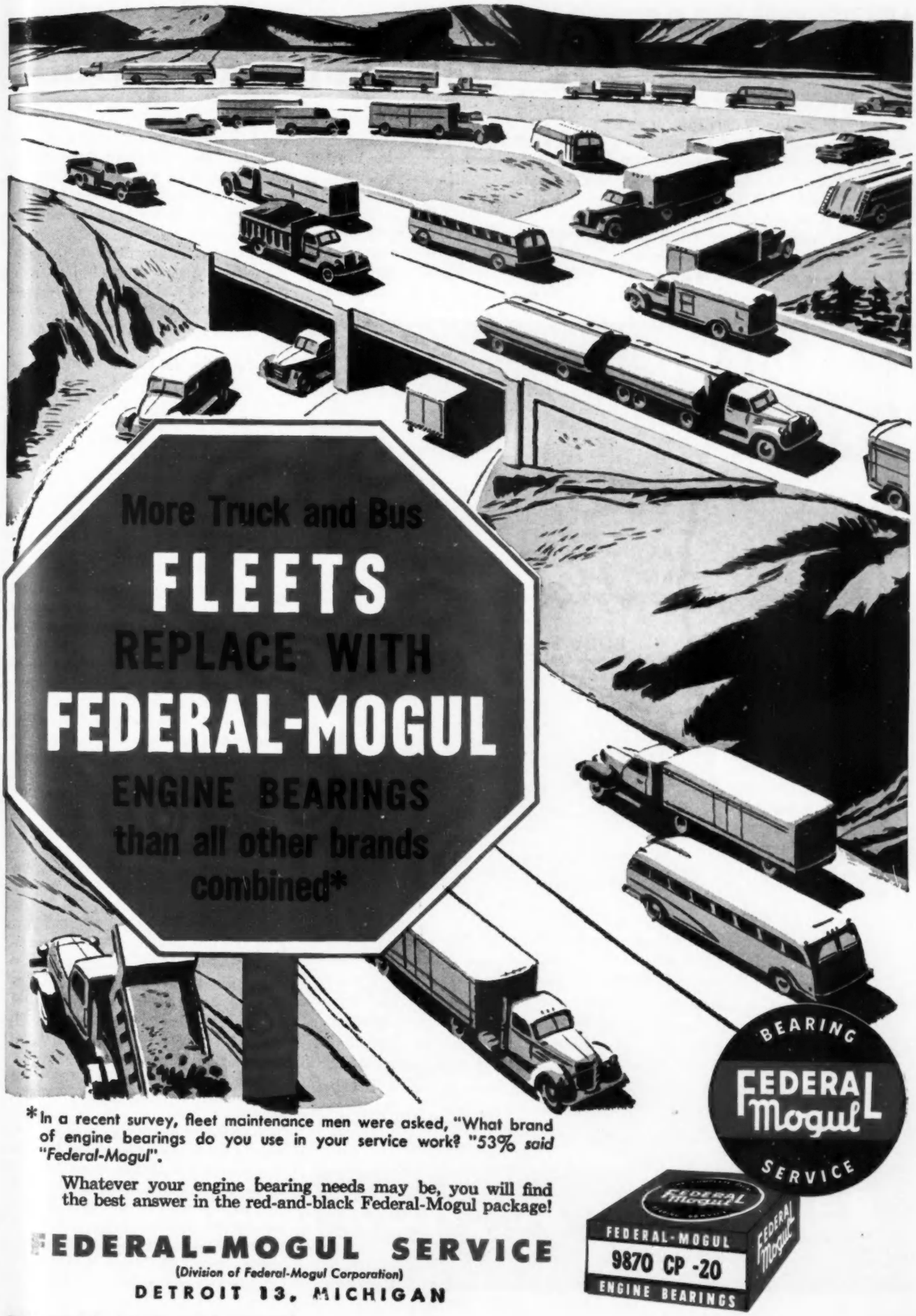
APRIL

5- 9—Fleet Supervisors Training Course—Dept. of Engineering, University of Maryland, College Park, Md.

5- 9—Fleet Supervisors Training Course—Dept. of Civil Engineering, University of Washington, Seattle 5, Wash.

19-23—Fleet Supervisors Training Course—General Extension Division, University of Florida, Gainesville, Fla.

19-23—Vehicle Maintenance Course—Continuing Education Dept., Michigan State College, East Lansing, Mich.



*In a recent survey, fleet maintenance men were asked, "What brand of engine bearings do you use in your service work? "53% *said* "*Federal-Mogul*".

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Trailer Builders Discuss

AT A NEW location and in an entirely new type of proceedings, approximately 150 members of the Truck Trailer Manufacturers Assn. used the round table method of discussing major problems of their industry. The convention was held at Boca Raton, Fla., in a three-day session, middle of last month.

While the problems were labeled as "The Big Issues" of the truck trailer industry, virtually all were of equal interest to fleetmen everywhere and a strong contingent from American Trucking Assns., headed by President Jack Cole, was on hand to coordinate TTMA's activities with those of ATA.

In capsule form these were the issues highlighted:

Highways

WHILE the trailer builders endorsed by resolution the nationwide activities of project adequate roads and urged its support by all segments of the industry, they went even beyond the PAR program by pinpointing highway needs in these eight particulars:

1. Better maintenance of the existing highway plant.
2. Priority construction for drive-out or passing lanes on hills.
3. Widening of highways where congestion exists.
4. Widening and strengthening of bridges.
5. By-passes for cities.
6. Opening up of bottlenecks in downtown city areas.
7. Endorsement of the New Hampshire state highway activities headed by General Merrill.
8. Urged that highway departments be divorced from political pressure and that highway personnel be encouraged by higher salaries.

Weight Distance Taxes

MUCH discussion centered around the new Ohio axle ton-mile tax. It was pointed out that this vicious new tax is expected to bring in about twenty-one million dollars at a cost of about nineteen million. Thus, the cost of administration becomes prohibitively high and at the same time reciprocity (See page 64, Jan. and Feb.) becomes practically abandoned. Later in the Convention, TTMA members passed a strong resolution directed to the governers of every state urging the prompt repeal of all highway weight distance taxes on the basis that they are the most serious barrier to efficient highway reciprocity.

BDSA Clarified

GEORGE Davis, well-known administrator of the old National Production Authority in Washington, was on hand to explain the activities of the newly formed Business Defense Services Administration. Mr. Davis explained that this new consolidated agency has as its main purpose the correlation of business and defense activities.

Now that the shooting war is over, he explained the necessity of keeping this government agency intact to serve as an intermediary between business and government procurement, not only for current needs but for setting up potential needs in case of an emergency. It will also serve as a nucleus for industry advisor groups which can

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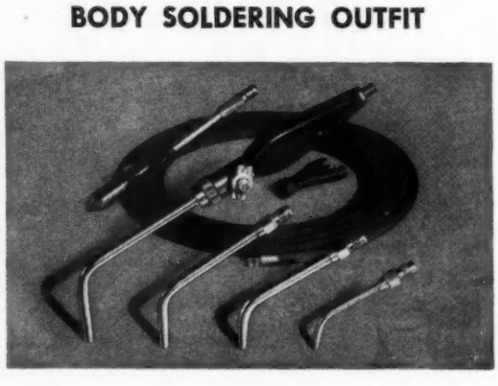

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Industry's Big Issues

serve not only for defense procurement but also as an advisory group in the event of a recession.

Industrial Relations

UNDER the heading of industrial relations, TTMA members let down their hair on dealings with labor, came up with the conclusion that where management has the confidence of labor, problems tend to disappear.

Operation "Piggy-Back"

TRAILERS on flatcars drew the biggest of all the discussion groups. On hand, as the nation's strongest advocate of this form of transportation, was Eugene Ryon, Rail Trailer Co., Chicago. Actually there was little in the discussion not covered by COMMERCIAL CAR JOURNAL'S extensive article on the subject beginning on page 66 of the Dec. 1953 issue. However, it should be pointed out that major emphasis was on the fact that *trailers on flatcars will never solve any of the nation's highway problems.* Obviously, such a small percentage of the total volume can be handled in this way that it will have no impact on highway congestion.

Nonetheless, most trailer manufacturers came away from the meeting with an open mind, waiting to see what developments may come from the various studies now being conducted by ATA, the Teamsters Union, General Motors flatcar building activities, and Mr. Ryan's activities as an intermediator between truck and rail interests. The latter promised some big news within the next thirty to sixty days in the way of further specific advances in rail trailer movements.

Truck Refrigeration

LAST of the major groups discussed the problems of adequate highway refrigeration practices and equipment. The discussion was led by Harold Johnson, United States Dept. of Agriculture, and J. L. Lawhon Refrigerated Transport Co., Atlanta, Ga., was on hand to represent the carriers' point of view. It soon became evident that there is a continuing impasse between the operating companies and the manufacturers with regard to refrigeration problems.

Many large truck operators have felt that the manufacturers have neglected both refrigeration and insulating problems, leaving much of the details to inexperienced branch personnel. On the other hand, many manufacturers feel that the operators have not given sufficient thought to loading practices, precooling of trailers, proper sealing of doors and walls and other related essentials so necessary to good refrigerated transport practice.

Biggest problem of all appears to center around the fact that most commodity rates on products requiring refrigeration are set at a figure so low that it requires maximum loading to be profitable. Hence, the operator eyes every inch of available space and every pound of weight with a critical eye and often tends to cheat on the necessary thickness of insulation, thus overburdening his refrigerating mechanism and running the risk of damaged cargo. This is a subject that has occupied many previous TTMA discussions and appears no nearer solution than it was three or four years ago.

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Better Bearing Maintenance

Continued from Page 79

sity be restricted to the less dirty applications where ordinary wear will not result in exposed steel bearing surfaces, see Fig. 4.

The trimetal bearing has the same desirable surface characteristics associated with the micro babbit bearing along with improved load carrying capacity that is obtained by precision electroplating a surface layer of lead-tin-copper, 0.001 of an inch in thickness, over an intermediate cast copper-lead bearing alloy, Fig. 5. The cast copper-lead alloy (nominal 24 per cent lead) is metallurgically bonded to a steel back that provides the strength required to withstand the pounding and flexing inherent in engine bearing operation.

This three part combination provides an exceptionally long life, heavy-duty bearing that has gained a high performance reputation in the industry.

As the service requirements of bearings become more demanding, it becomes increasingly important to watch engine operating temperatures. It is necessary to operate within temperature ranges that will neither promote high temperature oil oxidation nor low temperature oil sludging. Oil sump temperatures should, if possible, be maintained close to the 200 deg F mark. Just for example, if sump temperatures increase to 300 deg F, the oxidation reaction rate in the sump would increase approximately thirty times, not to say what would happen to the oil spraying out of the bearing and splashing through the case.

Application of Bearing Materials

IN MAIN and connecting rod bearings the journal is rotating and in almost all cases lubrication is sufficient, so that the selection of bearing material depends almost entirely on loading. However, it is not the general practice to use materials other than tin or lead base babbitt with shaft hardness that are less than 235 Brinell. Where loads require heavy duty trimetal bearings, it is necessary to increase the shaft hardness to approximately 500 Brinell. This brings up an important point in shaft regrinding practice. That is, do not exceed the recommended regrind undersize! *Journal surfaces only are* hardened to a depth of 0.020-0.030 of an inch and by grinding too deeply the soft core material of the shaft is exposed. It has been the experience of a good many fleet operators that if this should happen, the shafts can be salvaged by hard chrome plating to allow 0.004-.006 in. of finished chrome on the journals. As a matter of fact, there are a few operators who have standardized on chrome plating the shafts on all rebuild jobs. However, a word of caution is required here because the chrome plate must be of high quality and the surface beneath the plate must be finished to a fine degree in order to support the plate.

Rocker arm bushing, because of their particular function, are subjected to an oscillating motion. This type of relative motion does not lend itself to the best conditions required for building and maintaining an oil film; therefore, the babbitt alloys, with their superior surface action, are probably most desirable. Where loads are a little more than the babbitts can successfully carry, a 25 per cent lead, copper-lead, steel backed material is often used. The copper-lead alloy, however, makes it necessary to change to a hardened

(TURN TO PAGE 112, PLEASE)

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92-tooth Action Ratchet

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Fine action and rugged strength are combined in the new round head, ½" square-drive Bonney Ratchet Handle. The 92-tooth action means that less than 4 degrees swing is required between teeth—it takes far less swing to get a bite.

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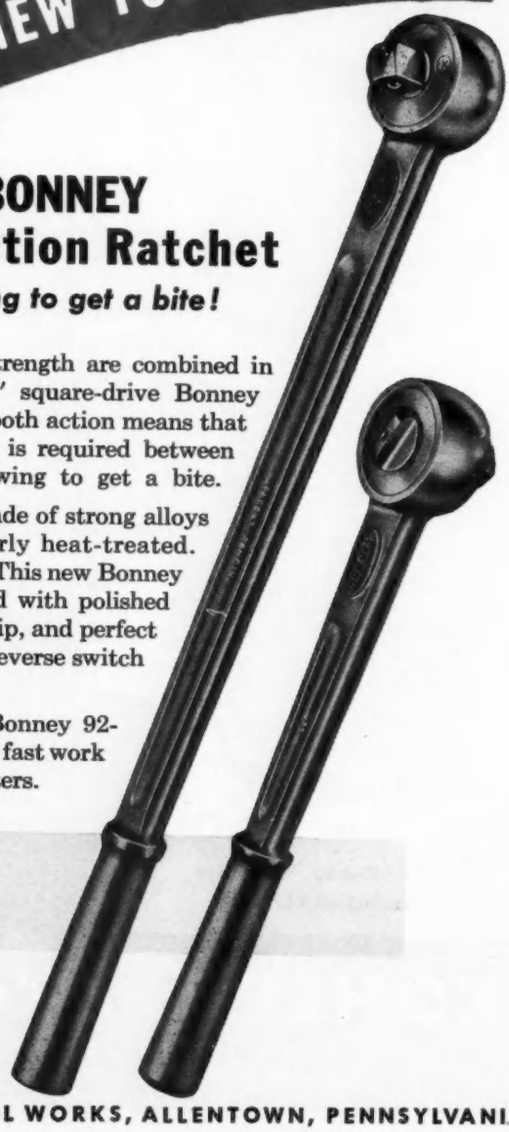

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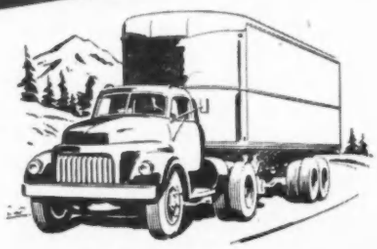

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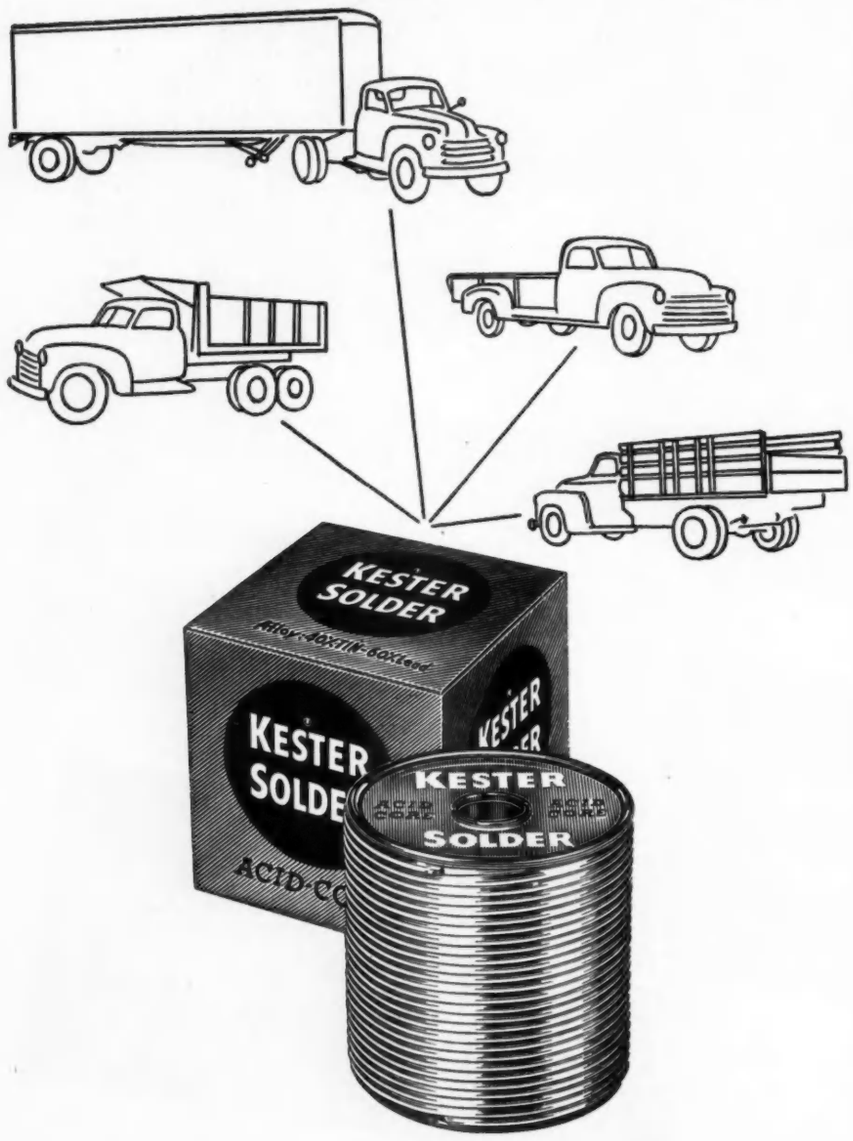

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. . . Bearing Maintenance

Continued from Page 110

shaft. In highly loaded applications, such as encountered in large Diesel engines, an alloy consisting of 80 per cent copper, 10 per cent lead, and 10 per cent tin is in wide usage.

Distributor bushings, while not subjected to high loads, operate at considerable speeds and lubrication is not always positive. With properly designed grooves, to assure adequate lubrication, the 25 per cent lead, copper-lead alloys will do an excellent job.

The most highly loaded bushings in an engine are the piston pin bushings. Operating temperatures are high, and because of space restrictions, loads are high. Therefore, an extremely hard pin on the order of Rockwell C-60, is used in combination with a high load carrying bearing material. The generally accepted alloy for this application is a steel backed 80-10-10 bronze (80 per cent copper, 10 per cent lead, 10 per cent tin). Although solid 4-4-4 bronze (4 per cent lead, 4 per cent tin, 4 per cent zinc, balance copper) or aluminum bronzes are sometimes used.

Starter motor bushings are characterized by intermittent use and the possibility of improper lubrication. Their requirements are met by a 25 per cent lead, copper-lead material with graphite filled indentations. The graphite filled indents, in the absence of oil, allow a film of graphite to spread over the bearing surface and provide lubrication during critical periods.

Surface finishes are as important as dimensional control on resizing operations and it is a good idea to provide a method for determining the acceptability of machined surfaces.

Reground shaft journals and thrust surfaces should not exceed 20 micro inches rms, and the grinding operation should be followed by a polishing operation performed with a very fine paper or cloth. Then, a few minutes should be spent in careful examination of the shaft in order to be sure that all burrs and nicks are found and removed with a fine file and stone.

Oil passages in the crankshaft must be checked thoroughly. It is not sufficient to merely run a wire through the holes. A rod, drill, or hand reamer, slightly under the oil hole size should pass freely through the passages. One would be surprised at the build-up that can occur exactly at the centerline of a shaft where the effect of centrifugal force does not exist.

END

Please Resume Reading Page 80

Bendix-Eclipse

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Throughout the trucking industry, the name "Bendix" stands out among all others in braking as the accepted standard for quality and dependability. Whether the braking system is air, vacuum or hydraulic, truck operators know from practical experience that Bendix *builds it better!*

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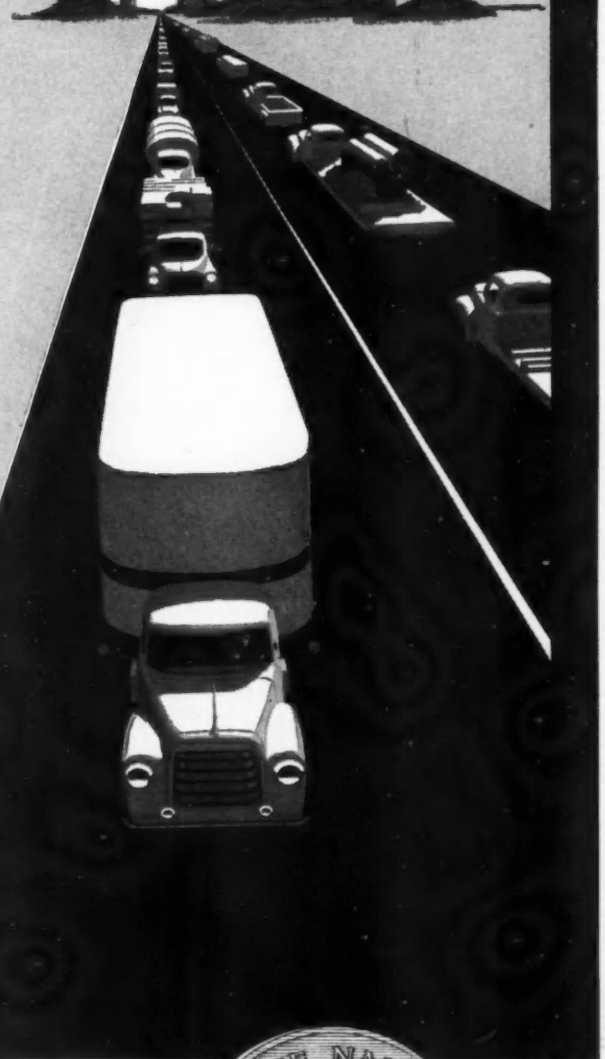

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New Bus Service

Continued from Page 67

condition. (Sample of triplicate form used for reports after inspections on school buses is shown on page 66.)

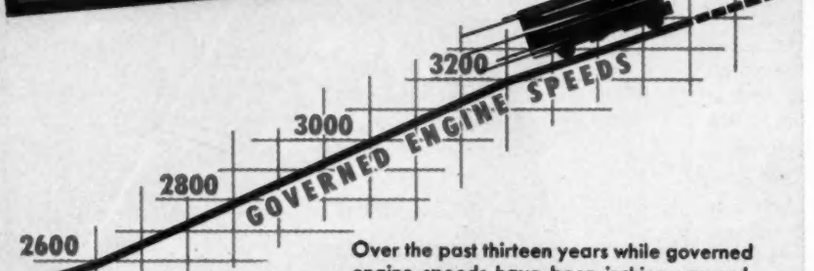
After nearly 20 years handling bus maintenance, and for 10 years handling bus maintenance through my own firm I am convinced that if the above described procedure of inspections and PM checkups and corrections is followed or applied to a bus fleet operation it will result in extending the safe life of the bus by a minimum of 25 per cent. This is conservative.

It will also go a long way toward lowering the bus accident record. In Oregon there has not been a fatality in a school bus accident in the past 10 years. I like to feel that our bus service policy has had something to do with this good safety record.

END

Please Resume Reading Page 68

Engineering Factors Contributing to
BETTER GOVERNOR
PERFORMANCE at INCREASED
ENGINE SPEEDS



Over the past thirteen years while governed engine speeds have been inching upward, King-Seeley engineers have revised practices and added refinements to provide progressively better governor performance. Some of these are:

1. Much finer, more positive calibration and at both ends of the speed range instead of just one.
2. Substantial reduction of allowable speed variation at control settings.
3. Straightening of the valve plate to avoid sacrifice of power.
4. Connecting the non-cheating stabilizer piston to the valve plate.
5. Greater precision in the design and machining of the control cam.
6. Development of a lock barrel for the conversion of all seal type units to avoid seal tampering.

King-Seeley maintains a continuous research program to anticipate automotive developments and provide governors having increasingly better performance.

PROTECTION HANDY ECONOMY

KING-SEELEY CORPORATION
ANN ARBOR, MICHIGAN
WORLD'S LARGEST MANUFACTURER OF AUTOMOTIVE GOVERNORS

PLANTS AT ANN ARBOR, SCIO, YPSILANTI

Torque Converter

Continued from Page 84

mission at all. "This was done in testing converter for heating and grade ability and road speed," says Jackman. "We have since changed 3rd gear from 1.75 to 2.06 ratio. This has helped in fuel economy. The average to date is 4.23 miles per gallon. It has also worked to an advantage on mountain grades. The change has given a more desirable road speed with engine rpm about 125 rpm above stall point."

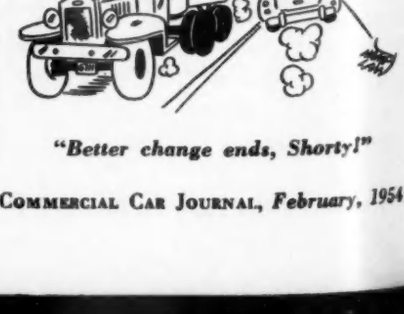
The converter is equipped with a lock-up drive and this is used in normal level operation, eliminating any "slip." As soon as a hill is encountered the lock-up is disconnected and the torque converter brought into play. In climbing mountain grades the only special thing the driver has to watch is engine and converter temperature, for which a special gage is provided. If either engine temperatures or a torque converter temperature rises above a specified maximum, he is instructed to drop into a lower gear manually.

Down Grade Retarding

ALSO noteworthy is the fact that the converter is effective in retarding vehicle speed on down grades. It has been found that there is a substantial reduction in brake wear. This is due to the fact that drivers are instructed not to exceed 1600 rpm against compression. To do this, constant checking is necessary to hold the rpm down. With use of the converter there is a definite retarding action with a safe road speed with engine rpm under 1600 on average grades. Second gear in converter, when used to power brake, has been ample for all conditions on the mountain grades with only two or three brake applications on a seven-mile grade.

END

Please Resume Reading Page 86



"Better change ends, Shorty!"

Shop Built Tools Cut Maintenance Hours

Continued from Page 81

control of this movement, while the lift does the same for vertical movement.

V-8 Engine Lift

A SPECIALLY designed lift bar (3) for Ford V-8 engines is very simple to use. A 2-in. angle iron of 3/16-in. stock, 19½ in. long, slips under and bears up against the exhaust ports. The hook moves freely in a notch cut in the center of angle iron. This hook is a U-loop of ½-in. bar stock welded to a 6-in. piece of 1-in. OD pipe. Pipe and loop are kept from dropping out of the angle iron by L-shaped bar stock welded into the corner of the angle iron and inserted in the ends of the pipe so the pipe can roll slightly.

Removing Transmissions

OUR stand for removing truck transmissions (4) can be used either on the lift or on the ground. It consists of a hydraulic jack bolted to a three-wheeled dolly that can be rolled under the truck. The jack is raised to take the weight of the transmission while it is unbolted and backed off, then lowered for removal. The jack has a lift pan shaped to take almost any transmission.

However, most of the transmission removal is done on the lift. In this case the pair of wheels on the dolly axle are removed. Then this dolly, jack and all, is laid on the four-wheel dolly running between the I-beams of the lift.

The flat four-wheel dolly consists of two 3-in. by 3/16-in. channel irons resting on 3-in. by 3/16-in. angle bars. The angle bars, as described previously, each have a pair of 3-in. wheels.

Notches are cut in the inner flanges of the channel irons, at one end, to receive the bare axle ends of the three-wheel jack dolly. At the other end the curved handle of the jack dolly rests on the angle iron of the flat dolly, the shafts of the handle having been pinched together to fit between the channel irons. In this way the two dollies are held rigidly together and move as one.

Keeps Paint Lines Clean

ONE gadget in the paint department is too small to need wheels. We use it to keep the insides of our paint spraying hoses clean. We get fifty per cent more life from our hoses, as well as keeping them flexible and free of caking.

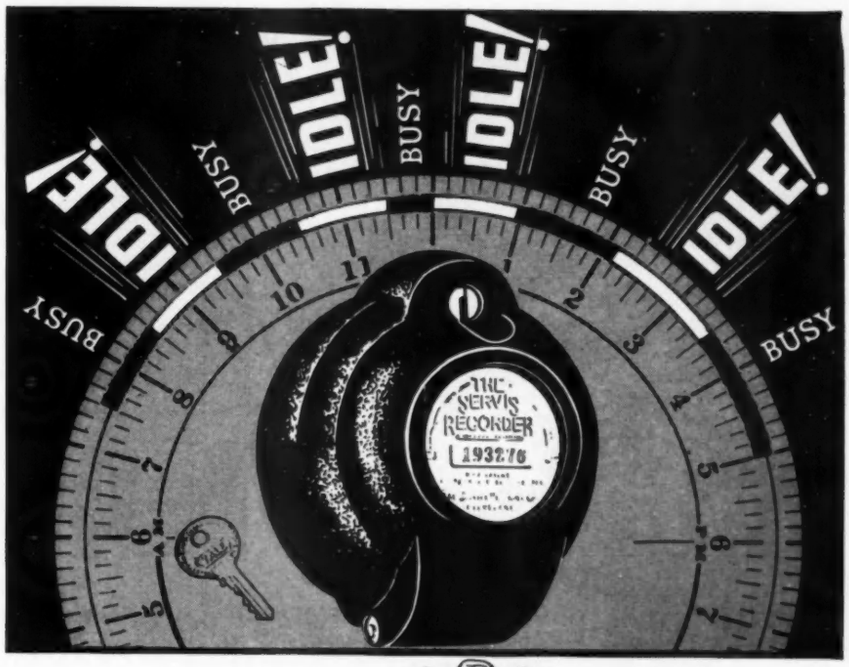
We fill a large discarded oil filter (5) with the cheapest lacquer thinner we can buy and push the thinner through the hoses with compressed air. Three legs were brazed on the filter to raise it off the floor and steady it. From the bottom extends an elbow plus a shut-off valve. Here the hoses to be cleaned are attached.

In the top of the filter are inserted an air nipple and a 1-in. gate valve. The nipple is hooked into the shop's compressed air line. The gate valve is both for bleed-off and for filling the filter with thinner.

Drying Lamp Stand

ANOTHER painting aid is the infra-red lamp stand (6), with four 250 watt bulbs, used for quick-drying touch-ups and filler treated spots. It's half of a five-gallon can mounted on a 63-in.

(TURN TO PAGE 118, PLEASE)



THESE DELAYS GRAB YOUR EYE!

LOOK at that first white gap on the Servis Recorder chart above. It shows the truck stood idle between 8:30 and 9:30—an hour of unproductive time.

You can't fail to see all idle time on the *Servis Recorder* chart . . . And an hour's time of a motor truck, what does it cost? Maybe up to twenty dollars!

SHOWS ALL DELAYS

By studying the chart you discover how much you can save—an hour or two a day! An extra trip! More work with the same number of trucks! A check on speeding! On overtime! Routes evened up among drivers, and a better effect on morale all around!

Get all this by installing low cost *Servis Recorders.* Write for FREE illustrated booklet. THE SERVICE RECORDER CO., 1375F Euclid Ave., Cleveland 15, Ohio.

The Servis Recorder

Tells Every Move Your Truck Makes

Utility Operator Takes a Look at Leasing

Continued from Page 71

Passenger Car Leasing

MOST passenger car leasing companies are either subsidiaries of new car dealers or have connections with one or more of such dealers. Their principal purpose is to meet the demand for the most popular low-priced "secondhand" cars. They purchase new cars from the parent company or other dealers, either at list price or at a discount, depending upon the competition in the area. They then proceed to rent or lease the cars in several ways, but usually on the following basis:

An annual interest rate depending upon the cost of money to them is applied to the initial investment. To this is added the annual cost of the license plates and the annual depreciation (usually about 2½ per cent per month), plus a small handling charge of perhaps 1 to 3 per cent. The total is then divided by the number of weeks or months in the rental or leasing period. This is the basic charge and to this is added the cost of fire and theft, liability and property damage insurance of varying amounts depending upon the customer's desires, and the estimated cost of gasoline and oil, if furnished.

It can be seen from this that the passenger car rental company acts as an outlet for the new car dealer, and the rental company in turn acquires good

(TURN TO PAGE 120, PLEASE)

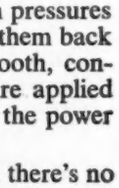
It pays to ask that question every time you purchase diesel-powered equipment because the Lanova Combustion System:

- Provides a more economical and effective method of converting raw fuel into useful power.
- Promotes higher combustion efficiencies by thoroughly mixing the fuel with the air needed to support combustion.
- Isolates jarring peak combustion pressures in the Lanova energy cell—feeding them back to the cylinder in the form of smooth, controlled working pressures which are applied to the piston over a full degree of the power stroke.

For the modern, high speed diesel, there's no finer combustion system.

SEND FOR THE INSIDE STORY OF DIESEL ENGINE COMBUSTION

The 58-page Lanova Handbook provides a simple clear-cut explanation of the importance of combustion in the modern high-speed Diesel. Write for a free copy.



Lanova

LANOVA CORPORATION

Dept. I, 38-15 30th Street, Long Island City 1, N. Y.

One of America's foremost names in diesel research and development

Shop Built Tools

Continued from Page 117

radius tube from the rear of a Ford car. Holes are drilled through the radius tube at 5-in. intervals, so the lamp body can be raised or lowered and held in place by a heavy piece of wire inserted through a pair of the holes. The whole stand is mounted on a tricycle arrangement of castors, 24 in. wide by 30 in. long, which makes the unit both mobile and hard to knock over.

Spray Helmet Ventilation

THE usual sandblasting helmet, we've found, isn't always protection enough either against particles of sand or from paint spray. So we hooked up a forced-draft ventilator (7). A piece of ⅛-in. copper tubing is shaped over the top of the helmet, and sewn there with heavy twine. From the back end of this tubing extends a 5 ft. length of ¼-in. windshield wiper hose. The hose terminates in a small control valve plus an air line connection.

At the forward end the copper tubing is inserted through the bill of the cap, so that it ends just in front of the wearer's forehead. A double thickness of filter cloth is tied over the open end of the tubing to break up the air stream and distribute it more evenly. This together with the valve at the connecting end permits the wearer to control the air pressure both for comfort and for force needed to keep foreign matter out of the mask. The air pressure needed will vary with the "back-pressure," of course, depending on whether the operator is working in a tight corner or in the open.

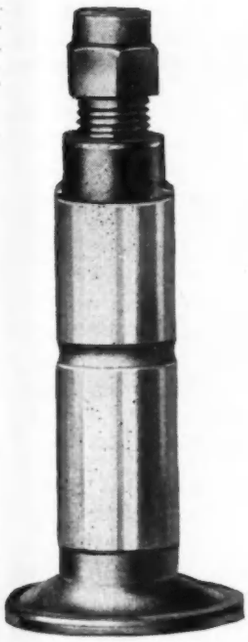
END

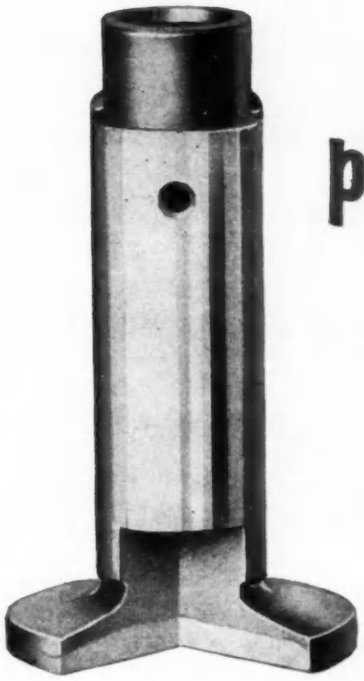
Please Resume Reading Page 82

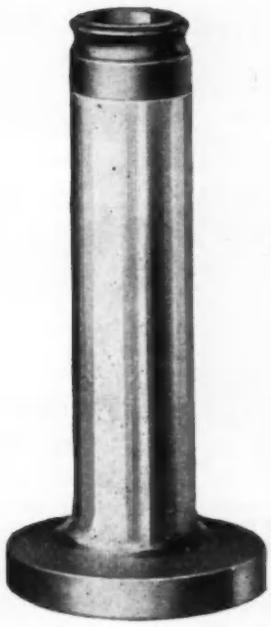
for modern high-speed engines

Eaton Tappets

stand up under prolonged heavy-duty conditions







The higher tappet loads in modern engines require extremely hard tappet faces and light weight bodies to insure proper functioning of the valve train. Eaton tappets combine these important advantages. A unique puddling method, perfected by Eaton over a period of years, produces exceedingly hard white iron tappet faces on steel bodies, providing high load-carrying capacity of face combined with desired lightness of the steel body. With this combination of superior strength, light weight, and wear-resistant face, these tappets can be depended upon to give long, trouble-free operation in heavy-duty service.

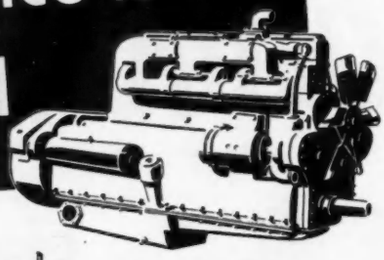
EATON MANUFACTURING COMPANY

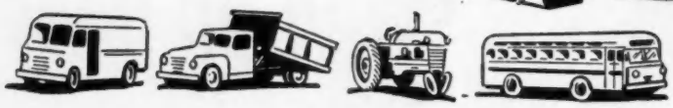
General Offices: CLEVELAND, OHIO

SAGINAW DIVISION: 9771 FRENCH ROAD • DETROIT 13, MICHIGAN

PRODUCTS: Sodium Cooled, Poppet, and Free Valves • Tappets • Hydraulic Valve Lifters • Valve Seat Inserts • Jet Engine Parts • Rotor Pumps • Motor Truck Axles • Permanent Mold Gray Iron Castings • Heater-Defroster Units • Snap Rings Springtites • Spring Washers • Cold Drawn Steel • Stampings • Leaf and Coil Springs • Dynamatic Drives, Brakes, Dynamometers

When Engine Performance Is Doubly Vital





Select Engineered Oil Filters

Cut-away view shows location of filter element in filter housing.

● No matter for what important purpose engines are used today—good oil filters are doubly important to—

- Save Oil
- Prolong engine life
- Prevent needless early parts repairs or replacements

MICHIANA Engineered Oil Filters have for many years proved that they accomplish the important savings mentioned above. Year by year they are used by more and more engine and engine-driven equipment makers—and the more exacting the task, the more the growing preference for MICHIANA Engineered Oil Filters is emphasized. Made for gasoline, diesel and gas engines of all capacities.

To insure maximum efficiency and protection, always use Michiana Replaceable Elements.

MICHIANA PRODUCTS CORPORATION
Michigan City, Indiana

MICHIANA
OIL FILTERS

Utility Operator... Leasing

Continued from Page 118

used cars at no cost to themselves. The user pays all of the carrying charges, the depreciation and all other associated costs. Under this plan, no provision is made for amortizing the investment because the major profit in the deal is made when the car is sold in the secondhand car market. The rental company is usually not equipped to make repairs and if any are required they have them done by a local garage. Before the vehicle requires new tires, a new battery or any extensive maintenance, the customer gets a new car and the old one is either sold directly or is turned in to the new car dealer for resale.

Many passenger car leasing companies came into being during the past few years. So much so that the secondhand market has become saturated as a result, and this is one of the reasons for the present sagging condition of the used car market. Most of the dealers have recently either extended the use period of their vehicles to twenty months or longer so that the user absorbs more of the depreciation, or they have increased their charges. Others have found the competition too keen and, like the Arabs, they "folded their tents and silently stole away." Some believe that shortly only large volume companies will remain in business and these will be the firms that finance the vehicles for their customers. This same finance service is available to large fleet users and involves a long term contract, usually for three years.

Truck Leasing

LEASING of trucks differs from that of passenger cars, and has many ramifications peculiar to the business. The main purpose is leasing or renting of trucks and the profit is made from that operation and not primarily in the resale of the units. They render various kinds of services, including hiring out trucks for short periods. Such trucks may be used by several customers and the charges are based on the overall cost plus overhead and profit of operating the units. They also rent or lease trucks to customers on a permanent basis, in which case the truck cannot be distinguished from any other trucks in the customer's fleet, and the leasing company may provide gasoline, oil and repairs. An alternate scheme called finance leasing is the same, but the leasing company may provide only the truck and no services.

(TURN TO PAGE 122, PLEASE)

FLEET OWNERS NOW YOU CAN BEAT THE CHROME RING BOGEY

American Hammered pre-seating means early break-in even though you re-ring with chrome. You can count on instant oil control confidently and be assured of premium performance for the exceptionally long life of the ring set.

PRE-SEATING—HOW IT HELPS YOU

This illustration shows the ring after it has been scientifically pre-seated at the factory by a precision lapping method equivalent to 300 to 500 miles of actual break-in operation.

The smooth, even bearing of the narrow land contact surface guarantees early break-in and fast oil control. If installed without pre-seating, the long wearing qualities of chrome would prolong the break-in.

This means you can install chrome, the rings will deliver the exceptionally long life which chrome imparts and still break-in extremely early.

AMERICAN HAMMERED

Pre-seated* Krome-Oil

PISTON RING SETS

CHROME WHERE IT PAYS OFF

Chrome on the top groove compression ring, the ring that takes the most punishment in heavy duty engines. Chrome here means longer life.

Chrome on the side rails of the steel oil ring assures longer life for the entire set.

American Hammered

AUTOMOTIVE REPLACEMENT DIVISION

2001 Sanford Street • Muskegon, Michigan

Manufacturers of American Hammered Automotive Replacement Piston Rings
A Division of Sealed Power Corporation

For the best in fleet maintenance remember American Hammered Power-Plus Service
Kosherizing • GI-60 Groove Insert • Dry Film Lubricant

Utility Operator... Leasing

Continued from Page 120

Large truck leasing companies have their own repair shops and when maintenance is provided the cost is, of course, included in the charges to the customer. The basic cost determination is the same as in the case of passenger cars, but the service charge is higher, usually a minimum of 5 per cent. Also, the original cost of the truck is included in the charges made to the customer. It can be seen, therefore, that the entire investment is written off by the customer so that he actually purchases the truck on time, and in addition pays for overhead and profit.

The leasing company will sometimes either furnish a new truck at the end of the leasing period on the same basis as the old one, or will permit the lessee to continue to operate the old truck at a greatly reduced rate. He will, of course, have to maintain the vehicle or pay an increased monthly maintenance charge. If the lessee elects not to continue using the old vehicle but wishes to have a new one, the cycle starts over again. It is sometimes arranged that the lessee will get a percentage (85 to 90 percent) of the resale price of the old vehicle when it is sold in the used truck market. This sounds wonderful, as mentioned at the beginning of this paper, but actually it is no inducement at all. The user has paid for the truck, and he could have realized 100 percent of the salvage if he had purchased it from a dealer and then sold it at the end of the comparable leasing period.

Special Equipment

RENTING of mobile equipment such as cranes, tractors, diggers, compressors, etc., is usually for short periods. Dealers in this type of equipment may rent used equipment, but generally do not lease new equipment to the same extent as in the case of passenger cars and trucks. They do, however, offer to rent a new piece of equipment for a specified period of time with the understanding that the user will either buy it at the end of the rental period or will return it. If he buys it, the rental charge is applied to the purchase price. This is solely an inducement to buy, and the dealer is protected because the user is actually buying the equipment on time during the rental period.

Sometimes the purchase may be made by time payments. This is not regarded as renting or leasing as such, because when the final payment is made the transaction is completed and the purchaser owns the equipment.

Leasing Advantages

PASSENGER car and truck leasing on a permanent or semi-permanent basis has distinct advantages for certain companies. It is particularly inviting to those companies that use standard vehicles, such as delivery services, newspaper and magazine distributors, milk companies, etc. It is very useful to firms that employ salesmen who have high annual passenger car mileage—20,000 miles or more. Renting or leasing has three main advantages:

1. It eliminates the necessity for having a repair shop with its overhead, supervision, labor troubles, and other headaches.

2. It permits capital for vehicle purchases to be diverted to other phases of the company's business where it may earn a greater return on the investment.

3. It is very useful for those businesses that require only a few trucks, and those whose trucking needs fluctuate.

The first advantage cannot always be enjoyed by public utilities because they

(TURN TO PAGE 124, PLEASE)

Make Sure it's a Lamson

Just think of the responsibility you take, mister, when you use a bolt on a customer's car. His safety, and that of his wife and kids, may depend upon that bolt holding up.

Or, at the very least, the goodwill of a customer is at stake. And that's mighty important, too.

Holding jobs such as this call for Lamson & Sessions "1035" Cap Screws—the double heat-treated high-tensile Cap Screws that are standard original equipment on most cars.

Lamson Cap Screws are your guarantee that threads won't strip, that shanks are straight and that the finished job will reflect the high calibre of your workmanship.

Always ask your jobber for Lamson Fasteners—and be *sure*.

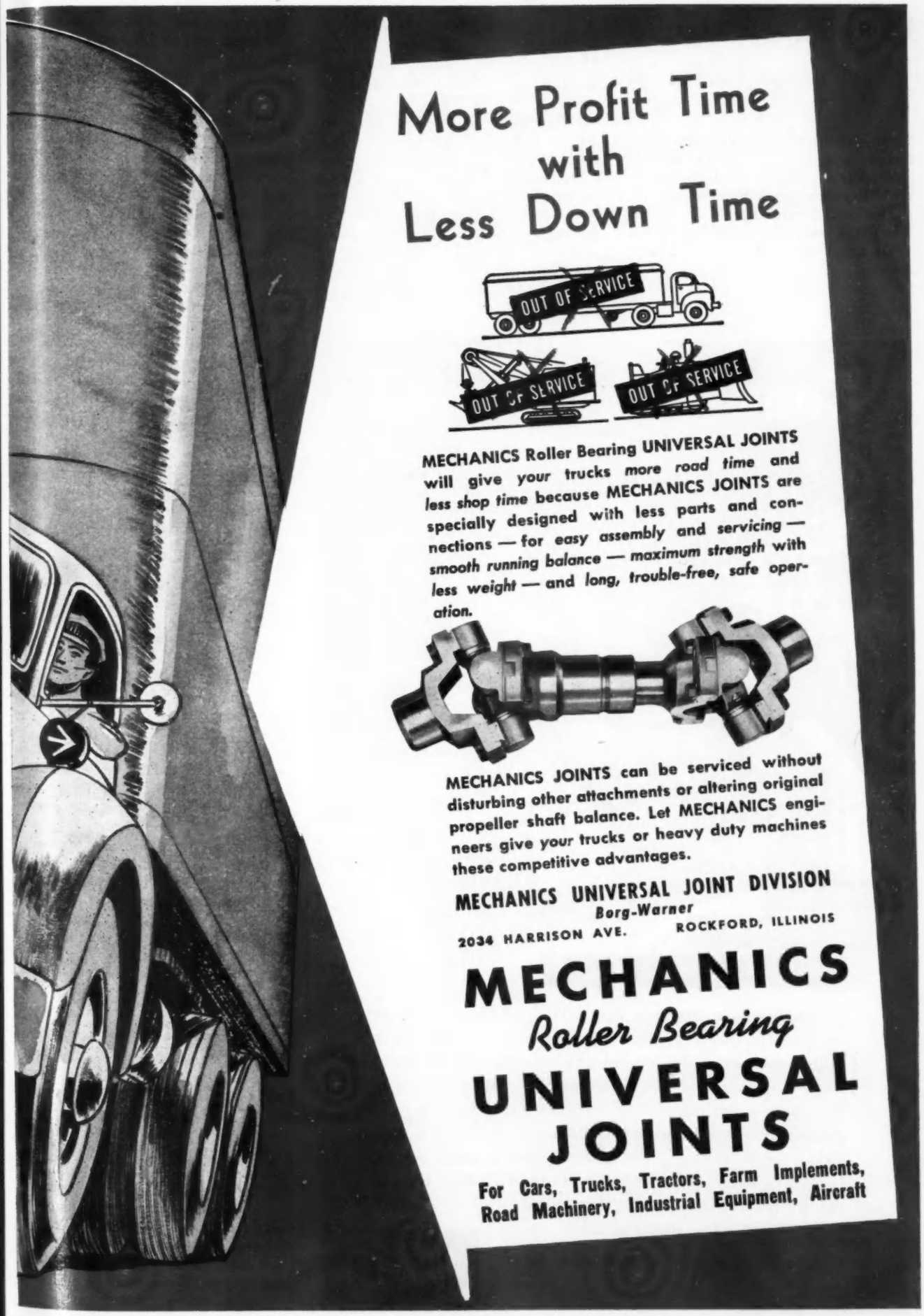
Lamson & Sessions

The LAMSON & SESSIONS Co.

1971 West 85th Street • Cleveland, Ohio

Plants at Cleveland and Kent, Ohio • Chicago • Birmingham

CAP SCREWS · MILLED STUDS · WHEEL BOLTS · SEMI-FINISHED NUTS · TAPPING SCREWS



More Profit Time with Less Down Time

MECHANICS Roller Bearing UNIVERSAL JOINTS will give *your* trucks *more road time* and *less shop time* because MECHANICS JOINTS are specially designed with less parts and connections — for *easy assembly* and *servicing* — *smooth running balance* — *maximum strength* with *less weight* — and *long, trouble-free, safe operation.*

MECHANICS JOINTS can be serviced without disturbing other attachments or altering original propeller shaft balance. Let MECHANICS engineers give *your* trucks or heavy duty machines these competitive advantages.

MECHANICS UNIVERSAL JOINT DIVISION
Borg-Warner
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MECHANICS
Roller Bearing
UNIVERSAL JOINTS

For Cars, Trucks, Tractors, Farm Implements, Road Machinery, Industrial Equipment, Aircraft

Utility Operator... Leasing

Continued from Page 122

usually have pieces of specialized automotive equipment in which leasing companies are not interested, and which the utility maintains in its own shop.

The second advantage is one to be considered, and may prove to be an advantage. The third is limited and obvious.

. . . And Disadvantages

RENTING or leasing also has disadvantages for utility operations. We will mention two; there may be others:

1. The lessee is dependent upon an outside agency for automotive equipment, some of which may be vital to the operations. If it is necessary for a leasing agreement to be terminated for one reason or another, it may be difficult to get replacements within a reasonable period of time.

2. The leasing company may undergo a reorganization or change hands and the lessee may find himself involved in litigation.

Cost of Money Important

INASMUCH as all leasing schemes are basically financing proposals, the problem boils down to whether it is more economical to buy new vehicles and finance them directly, or to have it done by an outside agency. A comparison involves, therefore, the cost of money, and whether it is desirable to use such money for this purpose. It may be found that the leasing company's cost of money borrowed from the bank is less than the cost of equity and risk capital to the utility.

The first step to be taken in making an economic comparison is to request the leasing company to state the items that comprise its proposal. It is not necessary to itemize the costs—just state what they consist of, and the total figure. Comparative costs can then be set up for the same items if the vehicle user does the financing himself. The cost of money to the vehicle user is, or should be, available for comparison purposes. Both schemes, leasing and direct purchase, should be on the same basis. Direct purchase should contemplate retiring the equipment at the end of the comparative leasing period or when the leasing company proposes to furnish a new replacement. Inasmuch as leasing does not require a capital investment, the comparative cost by direct purchase should include the amortization of the non-recoverable capital investment. The recoverable capital is, of course, the salvage value at the end of the comparable leasing period.

The leasing of trucks is essentially purchasing by means of time payments, and this fact should be kept in mind. If it is considered advisable to purchase equipment that way, it can be done through a dealer instead of through a third party who must, of course, charge for his overhead and profit in order to remain in business.

Many Overhead Costs Continue

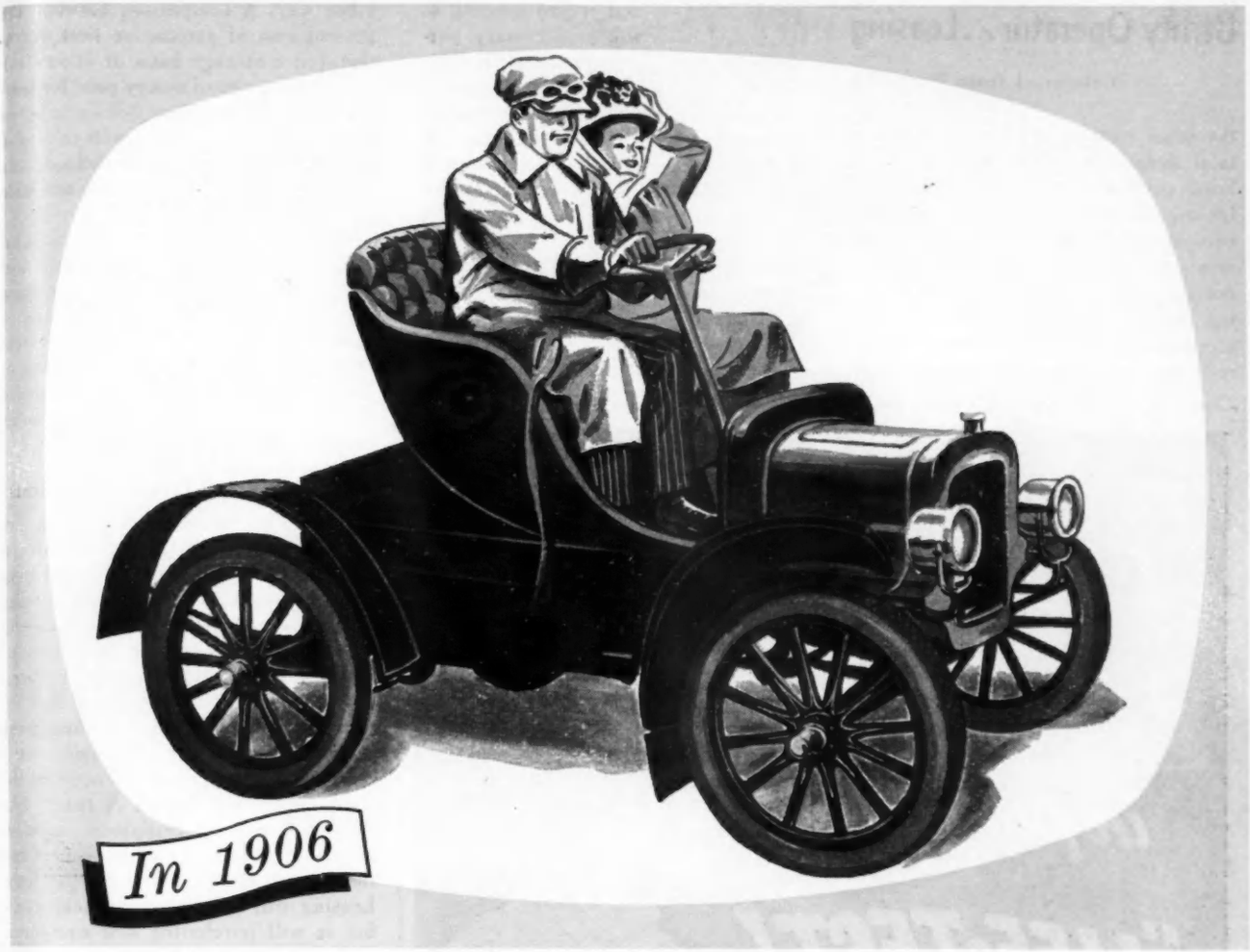
THE overhead costs of operating a fleet are a substantial part of the total costs, and it is the total costs that are the determining factor. It should be remembered in this connection that overhead costs will not be eliminated by leasing. Regardless of whether automotive or mobile equipment is leased or purchased directly, they are units of the fleet and as such they must bear their proportionate overhead costs of garaging, supervision, clerical operations, washing, etc. These must be added to

(TURN TO PAGE 126, PLEASE)

Packed in two assortments. No. 100A is for Farm Equipment Dealers; No. 100D for Truck Dealers. By assembling the required end yokes and journal crosses—right from this basic stock—any popular P.T.O. replacement can be "tailor made" Each assortment contains: 1 standard slip yoke (the quick disconnect type for Agriculture); 13 assorted end yokes, bore sizes from ¾" to 1¼"; 3 plain bearing and 3 needle bearing journal crosses. Carton 12½" wide by 8½" deep for convenient counter display. Each packaged as illustrated with catalog included.

Neapco Products Inc. • Pottstown, Pa.

NEAPCO



A one-cylinder Cadillac sold for $750...

and the first FITZGERALD GASKETS *were made*

FITZGERALD GASKETS today are engineered to provide the extra strength and ruggedness required for a lasting, perfect seal in modern high compression engines.

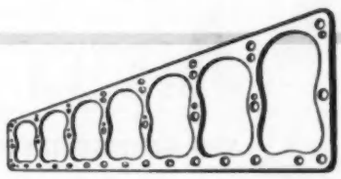
Since 1906 "FITZGERALD" has stood for top quality materials and workmanship, combined to make truly *dependable* gaskets — for every engine, gasoline or diesel.

THE FITZGERALD MANUFACTURING CO.

TORRINGTON, CONNECTICUT

CANADIAN FITZGERALD LTD. — TORONTO, CANADA

BRANCH AND WAREHOUSE — LOS ANGELES, CALIF.; CHICAGO, ILL.



Also...

GREASE RETAINERS • CORK GASKETS

FITZ-RITE TREATED FIBRE GASKETS

FOR OIL, GASOLINE

AND WATER CONNECTIONS

COMPLETE SETS FOR MOTOR REBUILDERS

FITZGERALD Gaskets SINCE 1906 — GET IT FROM YOUR JOBBER

Utility Operator... Leasing

Continued from Page 124

the other costs in order to arrive at a total figure. This fact regarding overhead costs is often overlooked when leasing is being considered. Leasing equipment will not *in itself* reduce or eliminate overhead costs although the contention is sometimes made that leasing reduces managerial attention and clerical operations. The extent of such reductions is debatable. Some managerial attention and record keeping of the leased units will be necessary, particularly in a large fleet operation. This is in the same category as the supposed advantage of having maintenance done by the dealer during the guarantee period of a new vehicle. Most defects in a new vehicle are of a trivial nature and it is usually more economical for a large fleet operator to forget the guarantee and make such repairs himself in most instances, when outage time, delivery to and from the dealer, etc., are considered.

The situation can be explained in another way. A comparison between the present cost of automotive fleet operation (on a mileage basis or otherwise) with the amount of money paid for leasing units of the fleet (on a mileage basis or otherwise) will result in a false picture. This is because the leased units are not charged for their proportionate share of the overhead costs.

Actually overhead costs are a separate problem entirely, and each fleet operator must determine for himself how they can be reduced. Either leasing or direct purchase and early retirement will result in the eventual lowering of overhead costs because of the reduced maintenance facilities that will be required if either policy is followed.

Maintenance Advantage Dubious

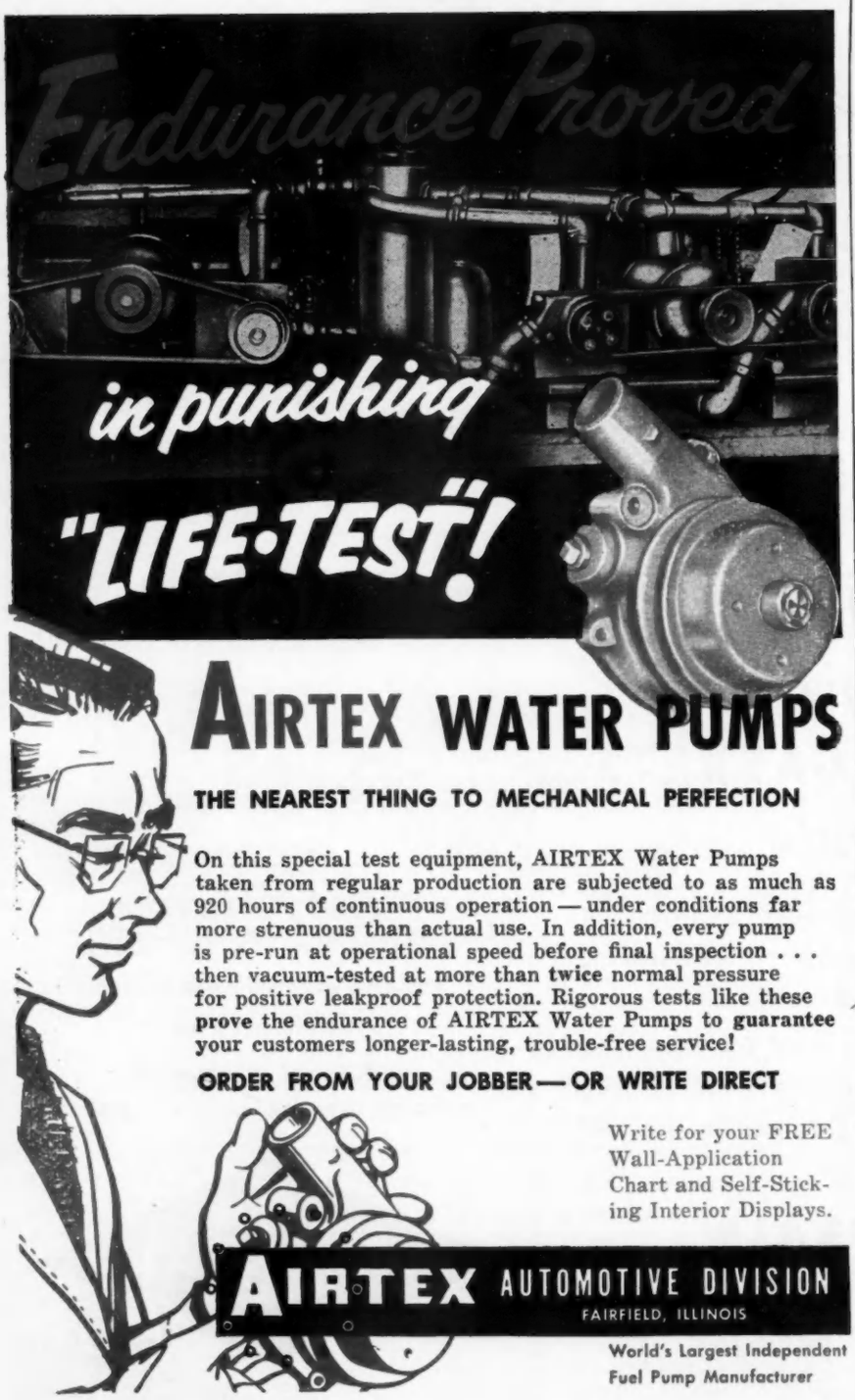
IF, AFTER the overhead costs are added, it is found that the total cost of leasing is still lower than the total present cost of operation (on a mileage basis or otherwise), the difference will be due largely to the present cost of maintenance. This is because the present total cost of operating the fleet includes maintenance, whereas the leasing proposal has either no maintenance included or it is greatly reduced by the short retirement period. A truck, like any other piece of equipment, requires a certain amount of maintenance and the cost is always borne by the user. Leasing will reduce maintenance costs, but so will purchasing new equipment and retiring it before heavy maintenance is necessary.

Renting of automotive and mobile equipment by public utilities is very advantageous for peak purposes such as repairs to storm damage, or for construction projects for a relatively short period, etc. Obviously, it is not economical to have capital tied up in spare units for these reasons.

It might be mentioned that leasing companies usually make the offer that the user need not worry about maintenance. If the vehicle proves defective, it will be exchanged for one in good running order. Suppose the brakes should lock, the engine need new spark plugs, or the battery is dead, etc.? Obviously, it is impractical to interrupt schedules and wait until a replacement arrives because of defects such as these, particularly if the defective vehicle has to be unloaded and the equipment and material reloaded in the replacement. If it is found advisable to rent vehicles for any reason, it is suggested that arrangements be made with the rental company that all defects, except those of a major nature, will be taken care of by you, and the rental company will be billed for those repairs.

END

Please Resume Reading Page 72



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THE NEAREST THING TO MECHANICAL PERFECTION

On this special test equipment, AIRTEX Water Pumps taken from regular production are subjected to as much as 920 hours of continuous operation — under conditions far more strenuous than actual use. In addition, every pump is pre-run at operational speed before final inspection . . . then vacuum-tested at more than twice normal pressure for positive leakproof protection. Rigorous tests like these prove the endurance of AIRTEX Water Pumps to guarantee your customers longer-lasting, trouble-free service!

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Write for your FREE Wall-Application Chart and Self-Sticking Interior Displays.

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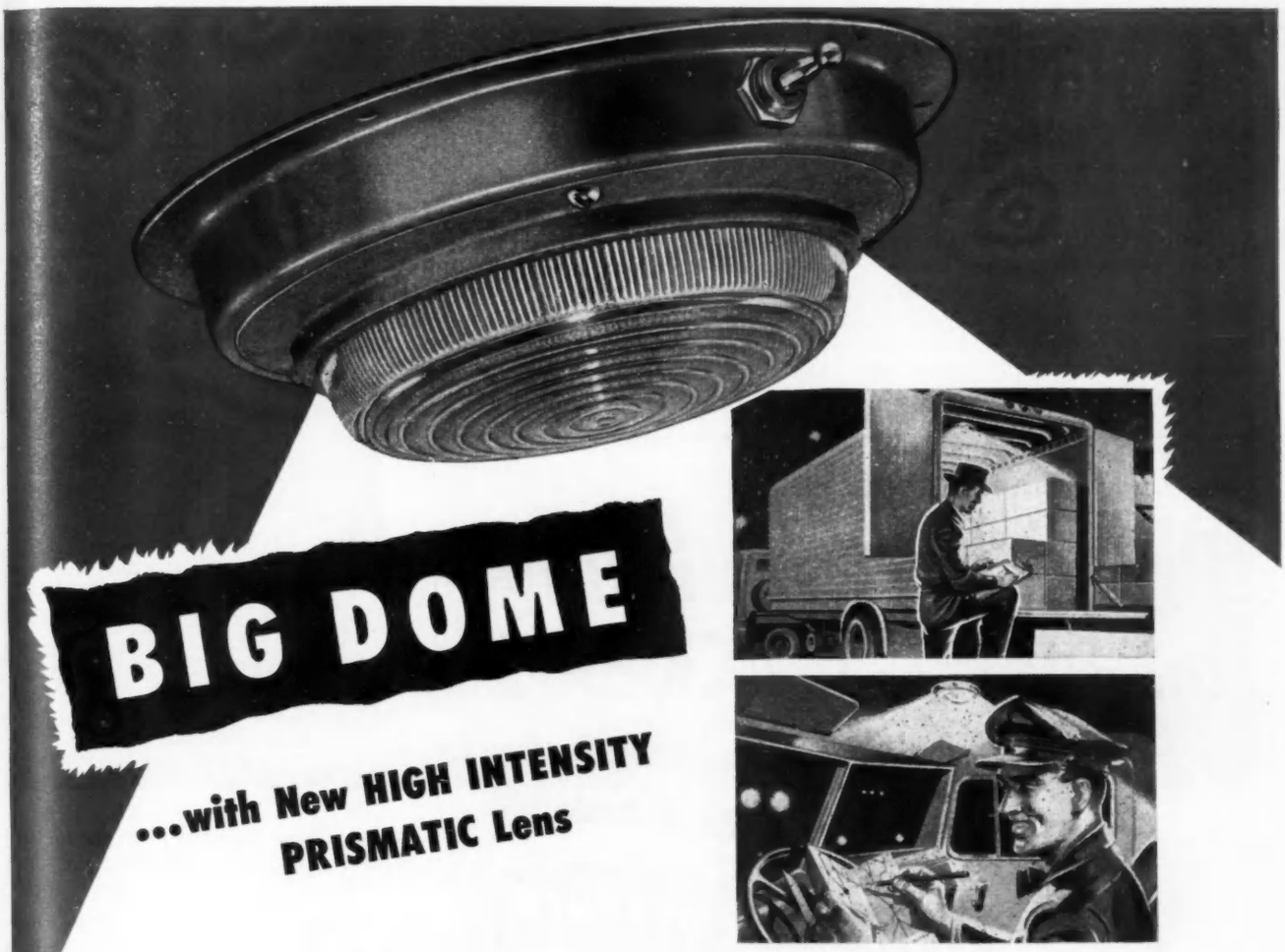
FAIRFIELD, ILLINOIS

World's Largest Independent Fuel Pump Manufacturer



BIG DOME

...with New HIGH INTENSITY PRISMATIC Lens

BRINGS MORE WORKING LIGHT TO TRAILER AND CAB INTERIOR

"Big Dome" is really big—and brilliant, too! It's a full 6 inches in diameter with a new high intensity prismatic lens which throws light into every corner.

The body is rust-proofed, has a lustrous gray aluminum finish baked on at high temperature. Versatile toggle switch can be used separately or mounted in lamp as shown. Continuous circle door. Flush mounted. 21 c.p., 6 or 12 volt bulb. (Model No. 151)

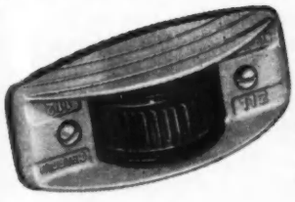
Compare these features—compare "Big Dome's" beauty and efficiency—with any interior lamp you've ever seen. You'll see why Griffin is dominating the field in fleet safety lighting.

Griffin engineers shoot for advancement in every detail—in heavy duty wiring and construction which stand up longer, perform better, under the most severe service.

It will pay you to standardize with Griffin —the complete fleet line.

THE GRIFFIN LAMP COMPANY
HAMILTON, OHIO

Now **PRESSURIZED ALUMINUM CLEARANCE-AND-MARKER**



The all-time favorite in clearance-and-markers is now yours in pressurized aluminum casting. The same type lamp of cast iron weighed 1.4 lbs.—this weighs only .78 lb. It's strong as a bull, light as a feather—good for aluminum trailers. Model No. 112.

GRIFFIN
AUTOMOTIVE SAFETY LIGHTING

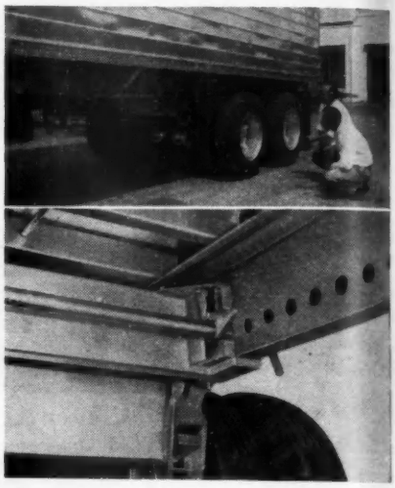
Trailmobile Announces Shiftable Tandem Axle

A NEW shiftable tandem axle suspension, just introduced by Trailmobile, Inc., Cincinnati, Ohio, enables fleets to avoid re-loading or shifting the load in order to conform to the varying maximum legal axle weight limits of each state.

The wheelbase can be lengthened or shortened as desired and the mechanism for moving the tandem suspension forward or backward has been designed so the driver can make the changes in a few minutes.

The total distance the tandem suspension can be moved is 45 in., but the weight distribution can be adjusted to a fine degree as the shifts can be made in increments of 3 in. in either direction. Three different basic settings are available.

The tandem is locked in the desired position by two removable solid steel bars which are placed through holes on 3-in. increments in two stationary



beams. One cross-bar locks the forward end of the suspension and the other locks the rear.

Bronze blocks fastened to the lower sub-frame of the tandem suspension slide on a stainless steel track along the base of the two stationary steel beams. Bronze and stainless steel are used to prevent corrosion and to eliminate the need for paint, either of which would increase friction and hinder sliding of the suspension.

If there are different types of tractors in the fleet, the shiftable tandem works with any type of tractor to make the load legal—whether cab-over-engine, conventional, tandem or pusher type.

The shiftable device is used when cab-over-engine tractors are interchanged with the conventional type tractor or in states where the axle laws vary or where tandem tractors are used. Western setting of the tandem can be changed to meet the Eastern requirements or vice versa.

The shiftable tandem adds approximately 700 lb to the trailer. However, with the shiftable tandem the average load can be increased, and it is possible to adjust the load on axles when the load decreases en route, without shifting the load.

SLIM 'N GREASY, OUR SHOP ROUSTABOUT, SAYS NOTHING ROBS A MAN OF HIS GOOD LOOKS LIKE A HURRIEDLY DRAWN SHADE!

Precision Rebuilding for DIESEL-TRUCK-BUS

SPECIAL DESIGN MACHINERY

EXPERIENCED WORKMEN

ENGINEERING KNOW-HOW

CONNECTING RODS
are remanufactured to original Factory Standards and Tolerances.

TRANSMISSION SHAFTS
are hard chrome surfaced and ground to original specifications.

ALL PARTS MAGNAFLUX INSPECTED

Write for Prices

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CLEVELAND HONE & MFG. CO.
8816 HARKNESS RD., CLEVELAND 6, OHIO
Serving the Nation's Largest Fleets

E-Z-Eye Tackles The Sun To Help Your Business!

See this test right at your desk

Prove to yourself the great difference between ordinary untinted windshields and E-Z-Eye. Ask for a Radiometer demonstration. Write Libbey-Owens-Ford Glass Company, 5424 Nicholas Building Toledo 3, Ohio and we'll send a man to your desk.

E-Z-Eye Safety *Plate* Glass in your trucks protects your drivers from the nagging, blinding glare of sun and sky brightness . . . reduces eyestrain and dangerous fatigue. That's a tremendously important safety factor.

And E-Z-Eye reduces incoming solar radiation—filters out much of the sun heat that would pour right through regular glass. This is a great advantage in the summer.

So for safety and comfort, be sure to get E-Z-Eye in your next truck. Only E-Z-Eye—made by Libbey·Owens·Ford—has the *shaded* windshield with the darker blue-green band at the top.

LIBBEY·OWENS·FORD GLASS CO., TOLEDO 3, OHIO

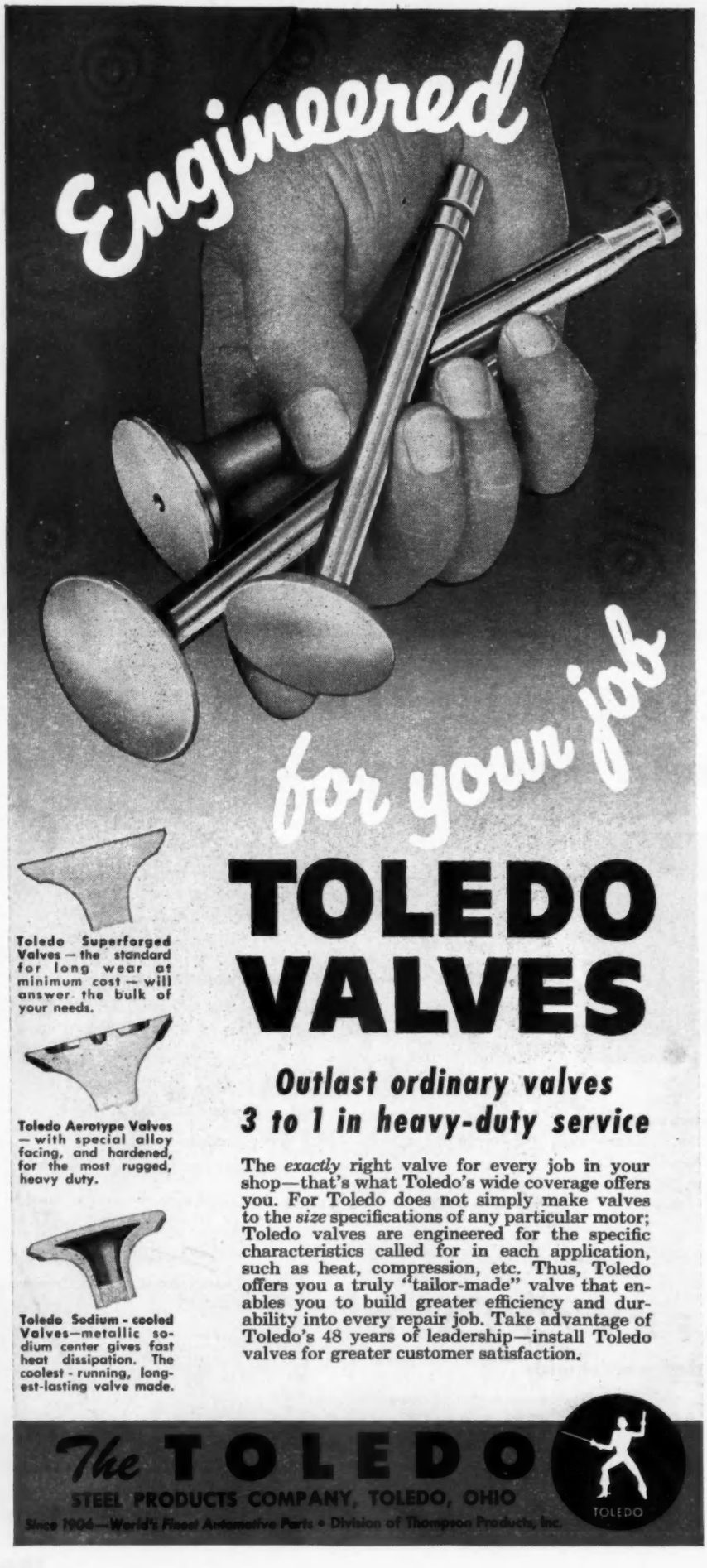
E-Z-EYE SAFETY PLATE

with the shaded windshield

Reduces Glare, Eyestrain, Sun Heat

E-Z-EYE SAFETY L·O·F PLATE

ALL L·O·F SAFETY GLASS IS GRADE-MARKED
If the word PLATE isn't etched on your car windows, they aren't safety *Plate* glass.



Toledo Superforged Valves — the standard for long wear at minimum cost — will answer the bulk of your needs.

Toledo Aerotype Valves — with special alloy facing, and hardened, for the most rugged, heavy duty.

Toledo Sodium-cooled Valves—metallic sodium center gives fast heat dissipation. The coolest-running, longest-lasting valve made.

TOLEDO VALVES

Outlast ordinary valves 3 to 1 in heavy-duty service

The *exactly* right valve for every job in your shop—that's what Toledo's wide coverage offers you. For Toledo does not simply make valves to the *size* specifications of any particular motor; Toledo valves are engineered for the specific characteristics called for in each application, such as heat, compression, etc. Thus, Toledo offers you a truly "tailor-made" valve that enables you to build greater efficiency and durability into every repair job. Take advantage of Toledo's 48 years of leadership—install Toledo valves for greater customer satisfaction.

The TOLEDO STEEL PRODUCTS COMPANY, TOLEDO, OHIO

Since 1904—World's Finest Automotive Parts • Division of Thompson Products, Inc.

Plastic Bodies

Continued from page 82

We haul paper and paper products, with 90 per cent of the load paper and 10 per cent glass. Equipment is subjected to extremely heavy usage in all types of weather conditions and temperatures, from the desert areas in California to the snow and ice covered mountains of the Pacific Northwest.

Even with our limited knowledge of the material and the technique, we can build the bodies out of plastic cheaper than we can with other materials. The material can be molded in any form, large, small or intricate, and damage can be repaired in far less time and at lower cost than with aluminum or steel repairs.

Weight is not much of a factor. With the steel frame we can't quite beat the aluminum body. And we don't know enough yet to take a chance on building a frameless plastic body. While the space factor is not tied to plastics, our aluminum and steel bodies have inside dimensions of 88 in., but this has been increased in our plastic bodies on the van type trailers to 90 in. and on the chip trailers to 93½ in.

The plastic trailers weigh 7700 lb as against the original 9000. The ¼-in. plastic floor surface of the chip trailer is molded directly to the floor of the truck after the 1¼-in. Douglas fir shiplap base floor has been anchored to the steel frame. The plastic binds the shiplap into one complete, smooth surface floor. The smooth walls and floor makes it possible to palletize handling of the wood chips.

It takes about ten days to build up a chip trailer from the bare frame. A van type trailer can be built in two weeks by two men.

Plastic Ribs

IN THE first plastic bodies we built we used stiffening ribs of thinwall ½-in. electrical conduit. The lower portion of these ribs, near the floor of the body, were occasionally damaged during loading. So we cast a 2-ft high plastic panel and installed it around the inside wall. In our later construction we've shifted to stiffening ribs of built up plastic.

We originally framed the doors in wood with plastic lining both inside and out. Now we usually mold the doors as part of the wall itself and then cut the doors out. The cut out section then becomes the inner panel of the door.

Construction

THE process is not complicated once the molds have been designed and built. These are constructed, in the exact size required, of wood, steel and plastic. The material, consisting of glass cloth and fiber mats, is then "worked" in these molds by "laying up" the fiber glass cloth and mat, which are cut to rigid specifications.

Once this is done, the material is saturated with the Vibrin polyester resin, distributed evenly with a squeegee and a whisk broom. As this proceeds, the door headers and the pre-formed ribs made of the same material, are pressed into the wet "lay up," ultimately forming a complete body section, the parts of which, when cured, become one integral unit.

The bodies are made in sections: the sides, the roof, front and floor section. Space at the rear is used for doors, or the doors may be installed at the side. After each section is completely cured, all the sections are assembled and bonded together by resin and mechanical means on a conventional trailer chassis.

The plastic material without an application of paint admits some 70 per cent of the ultra violet rays and the interior of the plastic body gets too hot for comfort. Paint, however, cuts this down to the point where the interior of a painted plastic body can be two to three degrees cooler than the outside temperature. A window effect is obtained by not painting an area on the sides or rear.

Truck and trailer bodies get a terrific beating from fork lifts, careless drivers, road hazards, weather, etc. Plastic bodies, however, take the punishment. They won't dent, rust or corrode. They are chemical proof and will stand up to 200-deg temperatures.

The glass cloth, which is Owens Corning glass fiber yarn woven by most all textile firms, furnishes the unusual strength of the plastic body and the fiber mat, made by Owens Corning Fiberglas, gives "body" to the plastic itself.

Easy Repair

DESPITE the ease of working with it, the plastic material offers a resistance to damage difficult to believe unless actually seen. A sharp blow only breaks the plastic resin surface at the point of impact, but does not touch the glass fiber. A break of this kind can be smoothed off and easily repaired. Even a break all the way through, producing an actual hole, can be easily repaired.

END

Please Resume Reading Page 84

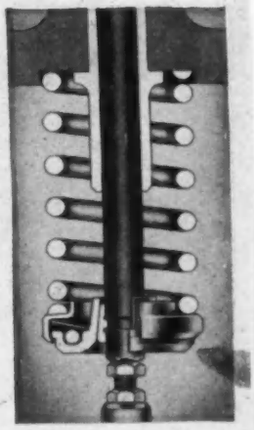
TOLEDO ROTOCAPS

Valve rotation imparts a wiping action which eliminates valve stem sticking and keeps valve face and seat free of deposits which cause blow-by. Minimizes the likelihood of grooving on tip of valve stem.

Valve rotation by Rotocap assures Maximum Valve Life

Valve rotation is a thoroughly proven means to longer valve life—sometimes as much as five times. Toledo furnishes many car and truck manufacturers with Rotocaps for positive rotation, and Rotovalves for non-positive rotation. This acceptance of Toledo valve rotators as original equipment by leading motor manufacturers is your guarantee of Toledo quality. Toledo's coverage in both positive and non-positive rotation gives you maximum sales opportunities.

The Toledo Rotocap is a positive type valve rotator, turning the valve approximately 3° each time the valve opens. Simple in construction, it is easily installed. The Rotocap comes as an assembly with the proper valve spring.



Typical valve-tip end installation. Rotocap may also be installed at the guide end of the spring.

The TOLEDO STEEL PRODUCTS COMPANY, TOLEDO, OHIO

Since 1906—World's Finest Automotive Parts • Division of Thompson Products, Inc.

GEARED for topper
because they'rege

TAKE away its GMC and you'd have a toug time telling the timing gear above from a ordinary part. But that tiny mark makes whale of a difference when you're choosin replacements for your trucks.

It's your guarantee of a perfect fit. GM tolerances as close as *one-half one thousandth* o *an inch* protect you from little imperfection that invite big troubles.

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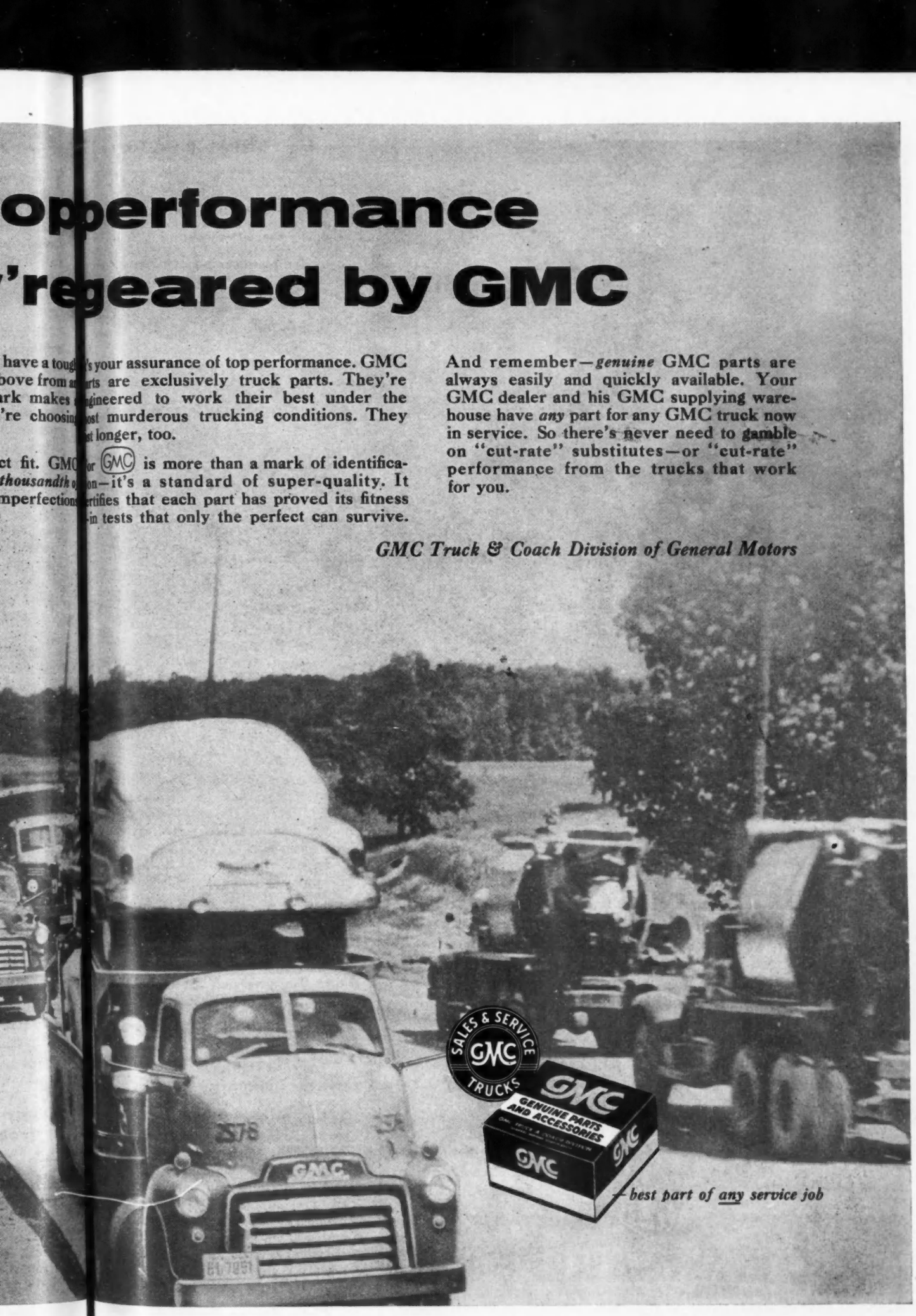
or GMC is more than a mark of identifica-
on—it's a standard of super-quality. It
ertifies that each part has proved its fitness
in tests that only the perfect can survive.

And remember—*genuine* GMC parts are always easily and quickly available. Your GMC dealer and his GMC supplying warehouse have *any* part for any GMC truck now in service. So there's never need to gamble on "cut-rate" substitutes—or "cut-rate" performance from the trucks that work for you.

GMC Truck & Coach Division of General Motors



— best part of any service job

Light Weight, Rigid Tank

With a payload advantage of from 2000 to 7000 lb as compared with conventional all-steel tank trailers, the entire cost of this light weight milk tank trailer is expected to be paid for under normal operating schedules within two years. Of fiber glass reinforced plastic and stainless steel and equipped with single axle air suspension, the tank's construction was described on page 138 of the December issue. It was designed to haul 4000 gal of milk on a single axle within New York's weight limits.

HOLLAND

The Fifth Wheel that does the job best!

Whether it's over-the-road hauling or a special application, Holland has the Fifth Wheel that's *built for your job.* You'll have a Fifth Wheel that's rugged in construction, smooth in operation, most economical to use because it's engineered by specialists in hauling equipment.

Write for the complete Holland catalog, and the name of the nearest distributor. You'll find it pays off in safe hauling to specify and use Holland Fifth Wheels, including the famous Holland-Apgar Safety wheel.

Use Holland-made Pintle Hooks and Landing Gear, too

HLH

HOLLAND HITCH COMPANY

HOLLAND • MICHIGAN

You Don't Have to be Big...

Continued from Page 70

jector and pump maintenance. In this diesel room is located the first complete test stand installed in the northwest and still doing efficient service. It is shop-built and in addition to an infinitely variable electric drive includes special shop-designed fixtures for holding both injectors and pumps (CCJ, Feb. '51, Page 58).

While the parts department functions in a normal way with counter easily accessible to both the machine shop and repair area personnel, the storage area for rebuilt assemblies at the far end of the wing is unusually complete. Here all rebuilt components are stored in bins, racks or floor dollies, and it's a rule of the house that there must be "one of everything" ready when needed. Often this means far more than one because of expected daily demand.

Last but far from least of the major departments is the tire shop under the able direction of Walter J Davies, whose fame for squeezing the most out of tire mileage is known throughout the area. His secret? Nothing more nor less than doing the right thing at the right time. Tire personnel inspect and check pressures at weekly intervals; carry mating calipers wherever they go; see that rotation and recapping follow exact schedules.

Supervising all of its fleet's maintenance activities is C. A. Dyer. From his centrally located office he can look out at both the general repair and service areas and is but a hop and jump to any of the other departments. Only problem is to catch him long enough to find out that on its Buda and Cummins diesels the fleet averages 70,000 miles on a cylinder head; 230,000 miles on a general overhaul; has an annual mileage of better than 3,000,000 miles at a maintenance cost of $ .0451 per mile.

END

Please Resume Reading Page 71

Take your pick...

THEY'RE ALL JALTEN!

J&L's New JALTEN series enables you to select low-alloy, high-strength steel in the following combinations of advantages:

JALTEN No. 1 — High strength, good formability and fabricating —good resistance to low temperature impact.

JALTEN No. 2 — High strength, moderate forming—improved resistance to atmospheric corrosion.

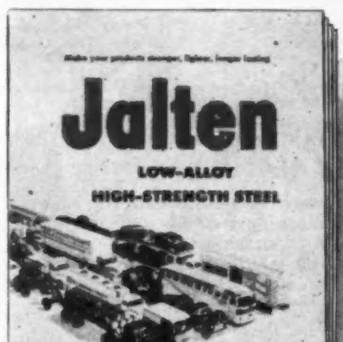
JALTEN No. 3 — High strength—improved resistance to abrasion.

Remember to specify JALTEN High Tensile Steel for

- **HIGH STRENGTH**
- **RESISTANCE TO CORROSION**
- **GOOD FORMABILITY**
- **RESISTANCE TO ABRASION**

J&L STEEL

Jones & Laughlin
STEEL CORPORATION — *Pittsburgh*



The data you want is in this book:

- Chemical Properties of Jalten
- Mechanical Properties of Jalten
- Jalten Equivalents
- Jalten Application Data

Jones & Laughlin Steel Corporation
Dept. 432, 3 Gateway Center, Pittsburgh 30, Pa.

Please forward a copy of your booklet, Jalten low-alloy, high-strength steel.

Name_____

Company_____

Address_____

FLEETMAN'S LIBRARY

Explosives loading and bracing in trucks and trailers is given extensive coverage in a new 65-page booklet developed by the Navy Department's Bureau of Ordnance. Fleets interested can get a copy by sending $1.25 to Superintendent of Documents, Government Printing Office, Washington 25, D. C. Ask for Catalog No. D215.6:L78.

Steel shop stools are described in a new bulletin, No. 704-4, available by writing Standard Pressed Steel Co., Box 747, Jenkintown, Pa.

Porcelain enamel identification signs for trucks and other uses are illustrated and described in Bulletin No. 1153 you can get by writing Ingram-Richardson Mfg. Co., 32nd St., Beaver Falls, Pa.

Pedestal tool grinders in 8 and 10 in. size made by South Bend Lathe and recently introduced are described in Catalog No. 5328. Write South Bend Lathe, South Bend, Ind., for a copy.

Chain hoists of the spur gear type in ½, 1 and 2 ton capacities of light weight, formed steel construction, trade-named "Challenger" are presented in a 4-page bulletin available from Coffing Hoist Co., Danville, Ill. Ask for Bulletin No. CH.

Oxyacetylene cutting and welding safety is the subject of a new sound-slide film entitled "The Guy Behind Your Back." Free showings of this 20 min film may be arranged through local Air Reduction Sales Co. offices. Further information may be obtained by writing the company at 60 East 42nd St., New York 17, N. Y.

Fire fighting accessory equipment for shops and terminals is listed in this new 66-page catalog. Items covered of interest to those concerned with fire protection for buildings include nozzles, valves, hose, pumps, fire tools and clothing, hose fittings, warning and signal devices, first aid kits, etc. Write Fyr-Fyter Co., 221 Crane St., Dayton, Ohio, for a copy.

Preventive maintenance is the subject of a brief booklet that gives the reasons for PM and describes White Motor Company's various "tailored" PM plans. Write White Motor Co., Service Sales Division, Cleveland 1, Ohio, to obtain a copy of "Partners for Good Truck Management."

Pistons for 1953 passenger cars, racing cars and heavy duty vehicles made by Triplex are listed in a now available catalog. Also included is information on finishing semi-pistons, lock rings, piston pins, alignment and assembly of piston pin and rod, piston sizes and cam specifications. Write Triplex Corp. of America, Pueblo, Colo., for a copy.

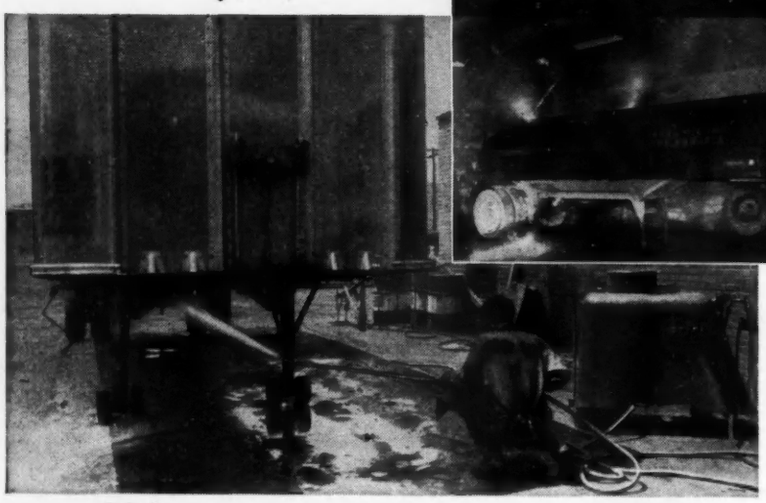
Automatic, sprinkler-type fire extinguishers, UL approved, that can be installed simply by suspending the extinguisher from a hook in the ceiling directly over the fire hazard are described in Bulletin No. SP-753 available from Stop-Fire, Inc., 125 Ashland Place, Brooklyn 1, N. Y.

LP gas engines in 404, 451 and 477 cu in. horizontal and vertical models are fully described and specifications given in Bulletin No. L-8679 you can get by writing Fageol Products, Twin Coach, Kent, Ohio.

(TURN TO PAGE 140, PLEASE)

"CLEAN UP" BY CLEANING UP ... WITH ...

HYPRESSURE Jenny STEAM CLEANER



SAVE 90¢ OF EVERY DOLLAR YOU NOW SPEND CLEANING EQUIPMENT BY HAND

Besides cleaning *10 times faster and better than any known hand cleaning method*—cutting cleaning time and labor expense 90%—JENNY shortens vehicle "down-time" as much as 40% by removing speed-retarding mud, muck and grease before repairs are begun.

JENNY saves shop time and expense by keeping equipment, tools, pits, lifts, floors, walls, etc., clean, safe and serviceable at a fraction of handcleaning costs.

For complete information on how Hypressure JENNY can save you time, labor and money and increase your earnings, send today for Free Booklet, "1001 Ways To Extra Profits With Hypressure JENNY."

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HOMESTEAD VALVE MANUFACTURING COMPANY

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For nearest Hypressure JENNY Jobber, consult Classified Section of your Telephone Book.

HERE'S WHAT THE SANDMAN SAYS...

Dan Thompson down in Atlanta makes his living hauling sand. He has been doing it, on and off the road, for years with his fleet of trucks. One day he found his tire and wheel costs were getting out of line, and he called in Harris Automotive Service, Inc., his local Budd Wheel Distributor. Let Dan tell it in his own words:

"I was continually plagued with road troubles, difficult handling, and what I considered unnecessary tire problems. My down time was excessive. Finally, I called in Walt Turner, of Harris Automotive Service, Inc. Walt recommended 20x6.50 Budd Wide Base Wheels with tapered bead seats for my 8.25x20 tires.

"I tried it—and it worked! I now plan to equip all my trucks with these Budd Wheels as rapidly as possible.

"I unhesitatingly recommend these Budd Wide Base Wheels to all my friends and I assure you they are 'strictly for me'."

D. E. Thompson

D. E. THOMPSON TRUCKING COMPANY

Budd

THE BUDD COMPANY

Detroit 15

LOS ANGELES—Wheel Industries, Inc.
LOUISVILLE—Auto Wheel & Rim Service
LUBBOCK—Southwest Wheel, Inc.
MEMPHIS—Beller Wheel, Brake & Supply Co.
MILWAUKEE—Stone Manufacturing Co.
MOLINE—Mutual Wheel Co.
NASHVILLE—Beller Wheel, Brake & Supply Co.
NEWARK—Automotive Safety Inc.
NEW HAVEN—Connecticut Wheel & Rim Co.
NEW ORLEANS—Southern Wheel & Rim Co.
NEW YORK—Wheels, Incorporated
OKLAHOMA CITY—Southwest Wheel, Inc.
OMAHA—Morgan Wheel & Equipment Co., Inc.
PEORIA—Peoria Wheel & Rim Co.
PHILADELPHIA—Thomas Wheel & Rim Co., Inc.
PITTSBURGH—Wheel & Rim Sales Co.
PORTLAND—Six Robblees', Inc.
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RALEIGH—Carolina Rim & Wheel Co.
RICHMOND—Dixie Wheel Co., Inc.
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SALT LAKE CITY—Henderson Rim & Wheel Service
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SEATTLE—Six Robblees', Inc.
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SPOKANE—Bearing & Rim Supply Co.
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SYRACUSE—Colbourn Wheel & Rim Service, Inc.
TACOMA—Six Robblees', Inc.
TOLEDO—Wheel & Rim Sales Co.
WICHITA—Borbein, Young & Co.
WINSTON-SALEM—United-Automotive Service

EXPORT

CLEVELAND—C. O. Brandes, Inc.

CANADA

CALGARY—Mutual Supplies, Ltd.
EDMONTON—Alberta Wheel Distributors, Ltd.
MONTREAL—Auto Wheels & Supplies, Ltd.
TORONTO—Wheel & Rim Co. of Canada, Ltd.
VANCOUVER—Wheels & Equipment, Ltd.
WINNIPEG—Ft. Garry Tire Service Ltd.

Fleetman's Library

Continued from Page 136

Hand hoists with capacities from ½ to 2 ton are described in Bulletin No. P-1254A you can get by writing Yale Materials Handling Division, Yale and Towne Mfg. Co., Philadelphia 15, Pa.

Welding rod wall chart, 22 by 34 in., available from Dept. P, Eutectic Welding Alloys Corp., 172nd St. and Northern Blvd., Flushing 58, N. Y., is a handy reference for easy selection of proper welding alloys.

Services and supplies offered by American Trucking Assns., Inc., are described in ATA's new 1954 catalog. Copies are available by writing the Assn. at 1424 Sixteenth St., N.W., Washington 6, D. C.

Sales training course in one volume has been developed for motor carrier salesmen for at-home study. Price of the book alone is $3.00, for the grading and coordinating service it is $15.00. For information, write Regular Common Carrier Conference, American Trucking Assns., Inc., 1424 Sixteenth St., N.W., Washington 6, D. C.

Hydraulic valves with 5.4 gpm capacity at 0 to 1000 psi are described in a folder you can get by writing Skinner Electric Valve Division, The Skinner Chuck Co., Edgewood Ave., New Britain, Conn. Ask for Bulletin No. 529.

Service replacement capacitators—134 different types—are described in a new catalog, No. 200 D, available by writing Cornell-Dubilier Electric Corp., South Plainfield, N. J.

Chemical resistant finishes for trucks are described in this "Progress Report on Ferrolastic Chemical Resistant Coatings" you can get from McDougall-Butler Co., Inc., Dept. C/R, 2929 Main St., Buffalo 14, N. Y.

Gaskets and oil seals are described in a new catalog available from Felt Products Mfg. Co., Chicago, Ill. Ask for the new "Quick Service" catalog.

Welding costs and a way to reduce them are considered in a booklet available by writing A. F. Davis, The Lincoln Electric Co., Cleveland 17, Ohio.

Remanufactured water pumps for trucks, tractors and buses are listed in this catalog available from Parts Specialties, 5984 Lincoln Ave., Detroit 8, Mich.

Vehicle radio equipment is described in a series of 10 bulletins just published by Inquiry Section, GE Electronics Division, Electronics Park, Syracuse, N. Y.

Heavy duty storage batteries—20 types—are fully described in a new 12-page booklet you can get by writing The Electric Storage Battery Co., Box 8109, Philadelphia 1, Pa.

Portable hoists with capacities from ¾ to 15 ton are described in an 8-page booklet available from Coffing Hoist Co., 800 Walter St., Danville, Ill. Ask for Bulletin No. CL.

Timing light instruction manual issued by Auto-Test, Inc., 600 South Michigan Ave., Chicago, Ill., has on the cover, "Any similarity between these instructions and what you usually read is, we hope, purely coincidental." Says Auto-Test, ". . . you'll enjoy reading and laughing your way through this . . . booklet."

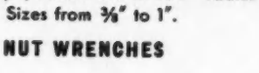
OTC Special Tools MAKE MORE MONEY FOR YOU!..

Save time, tempers, labor, parts and money with OTC tools built to do special jobs better, faster and easier. These and many other OTC special tools will pay for themselves on only a few jobs. Ask your dealer for OTC tools to fit your problem jobs.

SAVE TEMPERS WITH
FLEX WRENCHES

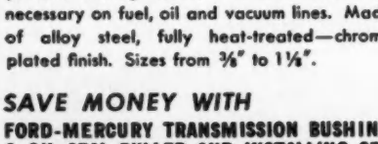
Sockets are extra deep, hot forged with thin straight walls for maximum clearance. Flex over any position within 180° radius of the handle. Sizes from ⅜" to 1".

FLARE NUT WRENCHES



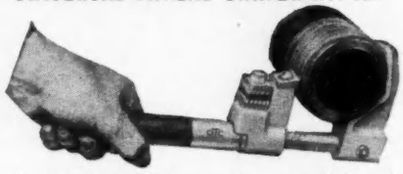
Hex openings provide a better bite and prevent turning corners on soft brass nuts necessary on fuel, oil and vacuum lines. Made of alloy steel, fully heat-treated—chrome plated finish. Sizes from ⅜" to 1⅛".

SAVE MONEY WITH
FORD-MERCURY TRANSMISSION BUSHING & OIL SEAL PULLER AND INSTALLING SET No. 400



Fits all 1949-1952 Ford or Mercury Models. Takes only 15 minutes to remove and accurately install both Bushing and Oil Seal. Make money with this OTC Time Saver.

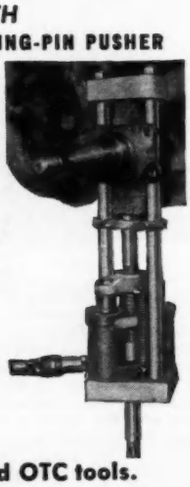
SAVE PARTS WITH NEW
UNIVERSAL THREAD CHASER No. 897



Restores battered damaged or crossed threads —eliminates machining. Adjusts quickly from 1½" to 5" diameter. Six chaser dies have 16 thread pitches from 4 to 24.

SAVE TIME WITH
OTC HYDRAULIC KING-PIN PUSHER

Do king-pin jobs easy *in minutes* with the 17½ Ton Power-Twin. No hammering—no damaged parts—no torque. King-Pin jobs bring good profits at flat rates . . . pay for tool on a few jobs.



WRITE FOR FREE BOOKLET

Booklet describes complete line of special and standard OTC tools.

OWATONNA TOOL COMPANY
341 CEDAR STREET . . . OWATONNA, MINNESOTA.

One-Man Cab for Visibility

Newly designed truck to haul premixed concrete was designed for Pacific Building Materials Co., Portland, Ore., by Raymond J. Seelie, fleet superintendent for Pacific. The truck has a one-man cab over the left front wheel for all-around visibility. Chassis was built by Freightliner Corp., Portland, Ore.

SHROUDED TWIN ELECTRODES

FOR PREMIUM PERFORMANCE...
...LONGER LIFE...
EASIER CLEANING!

You can *see* why the Hastings Aero-type Shrouded Spark Plug performs better, lasts longer, cleans easier. The electrodes are out of the path of the hot flame sweep—and there are *two* ground electrodes, set to the side for easier cleaning and longer service.

This new construction gives an entirely new standard of service. It allows the Hastings Plug to operate with considerably higher *insulator* temperature to eliminate fouling. At the same time, it allows lower *electrode* temperature to increase the life. And with double electrodes, there's twice the metal area to wear away.

And here is a plug you can clean thoroughly and easily. Cleaning abrasives get right into the entire tip, quickly renewing performance and life.

An improved H. T. Aluminum Oxide insulator . . . a corrosion-resisting solid copper gasket . . . a new performance rating system . . . a wider gap setting and a wider heat range . . . all add up to make this an extra-duty spark plug for heavy-duty work. Write for illustrated catalog. Dept. C, Spark Plug Division, Hastings Manufacturing Co., Hastings, Mich. (Spark Plugs, Piston Rings, Oil Filters, Casite, Drout)

HASTINGS

Aero-type-Shrouded **SPARK PLUGS**

Engineered for Replacement

How to Stop a Truck—Safely

Continued from Page 75

time and, as established in the S.A.E. Handbook, is the distance traveled or the time elapsed between the instant or point at which the driver has an opportunity to perceive a demand for braking and the instant or point at which the driver starts to move the braking controls. The average driver perception-reaction time using a conventional treadle type brake valve was (according to tests) 0.45 sec.

One fact not usually reported is the time required from instant of accelerator pedal release to start of movement of the braking controls. The average time required for this "foot transfer" was found to be 0.12 sec.

With the thought that the hand might be quicker than the foot, a special valve was rigged so that a handle was available directly under the steering wheel. To apply brakes the driver gripped the handle and squeezed. Results with this arrangement indicated no improvement because the average driver-reaction time was 0.48 sec as compared with 0.45 sec recorded with the usual foot arrangement.

When optimum driver perception-reaction times are compared to air application times, one might be inclined to assume that the air system is as liable as the driver in any problem of stopping distances or stopping time. Such an assumption would be true if the deceleration of the vehicle was the same during both periods. Actually it is not. During the driver reaction-perception time the vehicle, for all practical considerations, is "running free." However, once the braking controls start to move and the pressure in the brake chambers is enough to place the shoes in contact with the brake drums, a deceleration is in effect. The rate of deceleration increases with each increment of brake chamber pressure until the maximum deceleration rate is attained.

Analysis of many actual braking test curves has shown us that there is a "point of equivalent instantaneous brake application" at which maximum deceleration rate can be theoretically

(TURN TO PAGE 144, PLEASE)

* LEADERSHIP *can't be copied!*

ONLY AERO-SEAL Hose Clamps have these proven features:

* Precision worm gear drive that's really precision. Tightens band evenly all around * Won't shake loose when tightened. Withstands air-hammer vibration. Try the others on such tests * Threads of worm engage DEEPLY in precision-made band slots. Wiggle the gear—see how tight it fits—won't rattle * Removable with a twist of the wrist. Clamp is undamaged—re-usable again and again.

It's turnover that makes profits—not discounts. Feature quality clamps and make more money.

Aero-Seal WORM DRIVE HOSE CLAMPS

Another BREEZE Mark Product • Breeze Corporations, Inc., 41 South Sixth St., Newark, N. J.

Mobile Maintenance School

Top. A Clark fork-lift truck unloads a battery charger from the special over-the-road tractor-trailer unit prior to setting up the mobile service school sponsored by Clark Equipment Co., Battle Creek, Mich. for users of materials handling equipment.

Below. Instructor and assistant demonstrating a preventative maintenance procedure for the Dynatork Drive at a session of the service school. The board at the left is for demonstration of preventative maintenance techniques for hydraulic systems; the board at the upper right is for work on electrical systems.

from one dependable source

YANKEE

3 complete lines of class A type I directional signals

36 stock sets to choose from

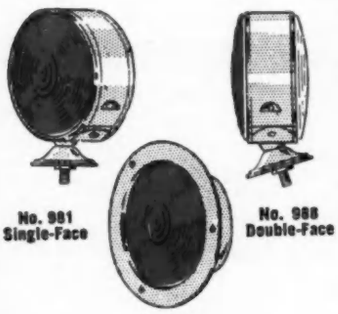
With positive self-cancelling or manually operated switches. Lamps, switches also available individually.

NO. 960 MANUAL SWITCH—Heavy-duty. Fingertip controlled. Positive Pilot Indicator and audible "click".

NO. 753 POSITIVE SELF-CANCELLING SWITCH—No slippage. Nothing to wear out. Easy installation. Positive Pilot Indicator and "click".

LOW COST
Thin-A* Lamps

Economy plus extra features. The only turn signal lamps that can be *aimed*.



No. 981 Single-Face

No. 988 Double-Face

No. 983 Flange-Mounting

HEAVY-DUTY
Reflector Type Lamps

Silver plated reflectors on brass assures maximum light output and longer life.

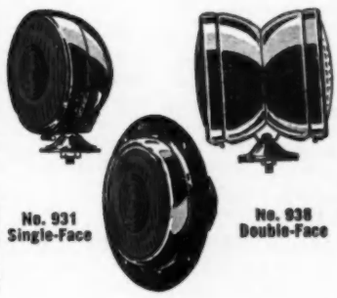
No. 921 Single-Face

No. 918 Double-Face

No. 926 Flange-Mounting

LOW MAINTENANCE
Sealed Beam Lamps

Stay bright longer. Moderate initial cost. Low upkeep.



No. 931 Single-Face

No. 938 Double-Face

No. 936 Flange-Mounting

only Yankee gives you all these features

Solve all your fleet turn signal problems from this one great line. Write today for our complete Class A Type I Signal Catalog.

1. **COMPLETE SELECTION**—There's a Yankee Class A Type I turn signal for all trucks and all budgets! Pedestal or flush mounting . . . 6-8 or 12 volts . . . Self cancelling or manually operated switch . . . you name it! Yankee's got it!
2. **HEAVY DUTY PERFORMANCE**—Heavy-gauge steel construction, bonderized against corrosion, rock-hard baked enamel finished—your assurance of longer life, lower maintenance cost. Burnout-proof switches have *positive* indicator light which operates only in the direction in which the turn is made.
3. **ECONOMY**—Yankee Class A Type I Signals are priced competitively. Three price ranges for three lines enable you to suit all your needs. Mile for mile, Yankee Signals will out-perform and out-last any signals on the market today, *bar none!*
4. **APPROVAL**—No matter where trucks operate Yankee Signals are approved. They exceed all S.A.E. and I.C.C. requirements.

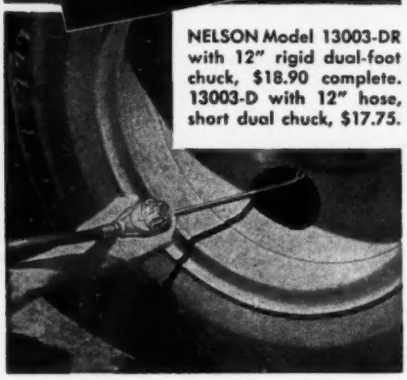
YANKEE METAL PRODUCTS CORPORATION, Norwalk, Connecticut

YANKEE

Save Time Save Tires

WITH

NELSON EQUAMATIC* INFLATORS

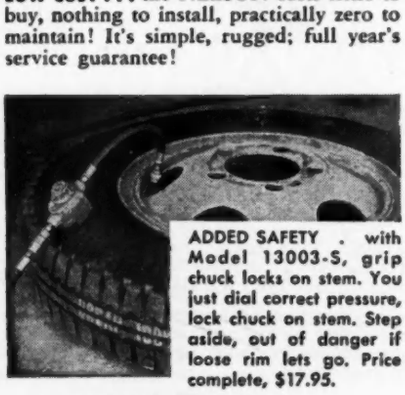


NELSON Model 13003-DR with 12" rigid dual-foot chuck, $18.90 complete. 13003-D with 12" hose, short dual chuck, $17.75.

SAVE TIME . . . just *dial* correct pressure, press chuck on tire valve stem; the NELSON "flips its own switch" when right pressure is reached. It's easy, it's fast—no gauge watching, no valving off!

SAVE TIRES . . . you get exactly equal pressures in each pair or set of tires, automatically! No "unbalanced" inflation to cause shimmy, hard steering, uneven tire wear. NELSON accuracy is *tops;* easiest inflator to keep accurate . . . recalibrate it right on air line! Get extra tire mileage by maintaining exact pressure recommended by manufacturer.

LOW COST . . . the NELSON costs little to buy, nothing to install, practically zero to maintain! It's simple, rugged; full year's service guarantee!



ADDED SAFETY . with Model 13003-S, grip chuck locks on stem. You just dial correct pressure, lock chuck on stem. Step aside, out of danger if loose rim lets go. Price complete, $17.95.

START SAVING NOW . . .
order from your jobber or write us today for free literature.

* EQUAL pressure in each pair of tires—AUTOMATICALLY!

BARMOTIVE
PRODUCTS INCORPORATED

440 PERALTA AVENUE
SAN LEANDRO, CALIFORNIA

How to Stop a Truck . . .

Continued from Page 142

considered as starting. When determining stopping distances or time the vehicle is considered as free running from the instant of percetion by the driver to the point of equivalent instantaneous brake application and at this point maximum deceleration becomes effective. To illustrate, refer to Fig. 1.

Fig. 1 illustrates a perfect stop from 20 miles per hour with a maximum deceleration rate of 19.3 ft/sec/sec. The plotted driver perception-reaction time is 0.45 sec and the foot transfer time is 0.12 sec. Analysis of our braking test curves revealed that the point of equivalent instantaneous brake application with relation to the instant of start of movement of the braking controls can be considered as being one-half (½) of the air application time. In plotting Fig. 1 we chose a nominal value of 0.4 sec for air aplication time. One-half of this, or 0.2 sec, established the point of equivalent instantaneous brake application.

Therefore, to arrive at stopping distance, the vehicle is considered in this problem as free running for 0.65 sec and then maximum deceleration rate occurs, resulting in a stopping distance of approximately 41 ft from instant of perception by the driver.

There is nothing the braking system, air or otherwise, can do about improving the driver perception-reaction time which is a human factor variable from person to person. If the braking distance or time can be achieved (perfect stop), then the only remaining factor that we have left to effect a reduction in stopping distance is the air brake system application time.

On the basis that our analysis of actual braking test curves is correct, and we can establish curves such as shown in Fig. 1, what do we gain by reducing air transmission times? If the air transmission time of a vehicle was reduced from 0.4 sec to 0.2 sec, then the free running time to the point of instantaneous brake application would be reduced by 0.1 sec and the resulting decrease in stopping distance would be 2.934 ft from 20 miles per hour. When compared to the perfect stop illustrated in Fig. 1 this represents a reduction of 7.1 per cent in stopping distance. In actual practice this 7.1 per cent would not be fully realized because the driver perception-reaction time probably would be more than 0.45 sec and the deceleration rate less than 19.3 ft/sec/sec.

END

Please Resume Reading Page 76

Reduces Excessive Exhaust Noise

RIKER QUIET TONE

Heavy Duty TRUCK & BUS

MUFFLERS

Improve public relations by installing Riker "QT" *heavy duty* truck and bus mufflers. The unique and exclusive Riker design serves a dual purpose:—

1. Reduces excessive exhaust noise.
2. Gives *long, economical* muffler life.

Riker Manufacturing designs and builds *heavy duty* mufflers *exclusively*. Therefore, these mufflers must meet all requirements in use. Riker "QT" mufflers are proven in use in cities and on highways for over three years.

OPERATORS! MAINTENANCE MEN!

Prepare now for critical months ahead. Write for complete data and prices on mufflers and exhaust system accessories. Or, see your jobber.

RIKER MANUFACTURING

4809 Detroit Ave., Toledo 12, Ohio

DESIGNERS-MANUFACTURERS
Heavy Duty
MUFFLERS
Exclusively

overhauls on tough mountain run

with STANOLUBE HD-M

REG. U. S. PAT. OFF.

Motor Oil

• The big diesel unit shown above is one of a mountain-climbing fleet of trucks operated out of Denver, Colorado, by Armour and Company. Lubricated by STANOLUBE HD-M Motor Oil, it was recently taken in for overhaul after operating 157,000 miles over steep grades and under extreme weather and temperature conditions.

The liners had less than .005 inch wear and showed no signs of scoring. They were reinstalled for further service. There was very little bearing wear and no pitting. Rings were free. The engine, overall, was clean and in good condition.

Throughout the Midwest, in a wide variety of service, STANOLUBE HD-M has proved its ability to reduce fleet maintenance and improve operating efficiency. The Standard Oil automotive lubrication specialist serving your area will be glad to give you the facts. Phone him at your local Standard Oil office. Or, write: Standard Oil Company, 910 So. Michigan Ave., Chicago 80, Ill.

STANDARD OIL COMPANY *(Indiana)*

Roads, Brakes, Engines & Fuel

Continued from Page 72

A. E. Johnson . . .
AASHO Load Test Section Project

THE American Assn. of State Highway Officials has been engaged in working on a proposed comprehensive load research project which will when completed, give engineers a better knowledge of the structural design needed for various loadings. The AASHO Road Test Project, now being set up, will provide laboratory controlled construction of specifically designed test sections of road along with sufficient instrumentation and staff to fully evaluate and analyze the results of the research.

A test section in Illinois was chosen as best representative of the majority of U. S. Highways from the standpoints of precipitation, frost penetration and uniformity of subgrade soils of the fine grained type. Loadings on this strip will extend both above and below those currently specified by the states as legal loads. Test traffic is to be applied by three vehicles each applying two test load applications per trip, traveling ten hours during the day and ten hours during the night, six days a week for a period of two years. During this time careful attention will be given road maintenance and all evidence of road damage will be duly noted.

It is expected that this study will furnish some valuable economic data such as grade requirements for various sizes of vehicles and the cost of operating various classes of vehicles over various terrains at various speeds. It should furnish definite evidence as to what constitutes comparable structural designs for flexible and rigid pavement construction for the same design loads. It should determine the relative effects of tandem axles as compared to their companion single axle loads. And finally engineers can compare measured payment stresses and strains with theoretical values obtained from design computations.

Such a research, by giving the effect of various axle loads upon road costs, will aid materially in arriving at an optimum balance between road life and road use for best overall economy for highway transportation.

Carl Georgi . . .
Quaker State Oil Refining Corp.

WHEN it comes to getting better engine fuel economy, viscosity of motor oils is what counts, and even viscosity makes a difference only under carefully controlled operating conditions, the author said. While indicated savings in fuel consumption with lighter oils appear to be quite significant, they apply only to ideal laboratory conditions. On the basis of the engine fuel consumption data presented, the following conclusions may be drawn:

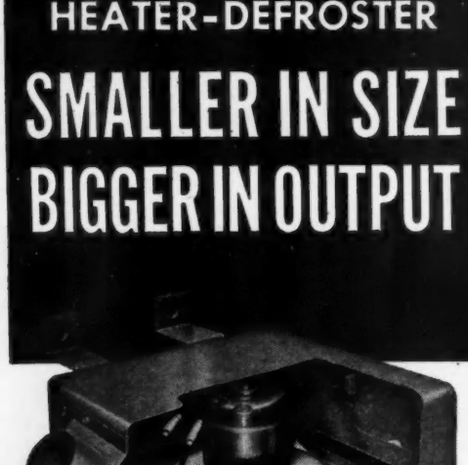
Popular types of "oiliness" or "friction reducing" additives display no measurable improvement in engine friction, power and fuel economy over that of the motor oil to which they are added.

The only significant property of motor oils relating to engine power, friction and fuel economy is viscosity.

Fuel consumption tests indicate the "engine viscosities" of oils containing V.I. improvers are lower than their "laboratory viscosities," since engine tests on the oil consumption tendencies

(TURN TO PAGE 151, PLEASE)

NEW
HEATER-DEFROSTER
SMALLER IN SIZE
BIGGER IN OUTPUT



SMALL
only 8-1/16" x 8-5/16" x 8-3/8"

POWERFUL
17,800 BTU Output

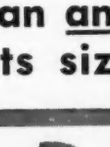
EFFICIENT
split core and tank travel water further — heat lingers longer

HEAVY DUTY
"Continuous service" bus type motor — heavy duty truck service core

ADAPTABLE FOR RECIRCULATING OR FRESH AIR
Simple to connect to top or side cowl for fresh air intake

THE NEW
EVANS ED-75
provides more heat output than any other heater-defroster of its size

EVERY EVANS HEATER IS EQUIPPED WITH THE FAMOUS EVANS UNBREAKABLE LIGHTWEIGHT FAN. Precision die-molded airfoil section blades . . . move more air with less noise and current draw . . . will not chip, crack or bend . . . unaffected by temperature . . . one piece construction.



Evans Products Company, Dept. Q-2, Plymouth, Mich.

... EVANS ... BALANCED HEATING & VENTILATING SYSTEMS FOR EVERY TRUCK AND BUS ...

Roads, Brakes, Engines . . .

Continued from Page 148

of such lubricants indicate the same condition. Two different approaches, one by engine tests on fuel consumption, and the other by engine tests on oil consumption, thus indicate the same conclusion; namely that oils containing V.I. improving polymers have "engine viscosities" appreciably lower than their "laboratory viscosities."

W. M. Holaday . . .

Socony Vacuum Laboratories

MR. HOLADAY said that development in fuel quality and in engine design constantly must be related. He explained that if fuel quality gets ahead, the car owner pays for something which gives him no benefit, while if engine compression ratio advances too rapidly, the car owner cannot obtain fuel which assures satisfactory performance.

High-octane fuels and high-compression engines will work together for better car performance, reduced consumption, and more transportation per dollar. Recent developments in catalytic reforming have effected major economies in the manufacture of higher anti-knock quality gasolines compared to the older processes. These advances, coupled with the gains made by the automotive industry in mechanical octane numbers, have made a reappraisal of the overall economics of the high-compression engine-high octane number gasoline relationship timely. This reappraisal indicates that 98 octane gasoline and 10:1 compression ratios will conserve crude oil and give the consumer more miles for his gasoline dollar.

. . . On Preignition

DIFFICULTIES experienced with preignition and knocking in modern high-compression engines were ascribed in part to crankcase oils. R. L. Overcash, W. Hart, and D. J. McClure, of Kendall Refining Co., cited the results of extensive tests to show that certain motor oils tend to reduce combustion chamber deposits and to resist both pre-ignition and knock, explaining that the tests were made not only under controlled laboratory conditions, but on the road in cars which had knocked with such severity that owners had complained to dealers. They added that the oils which reduced combustion chamber deposits also permitted use of gasolines of lower octane number.

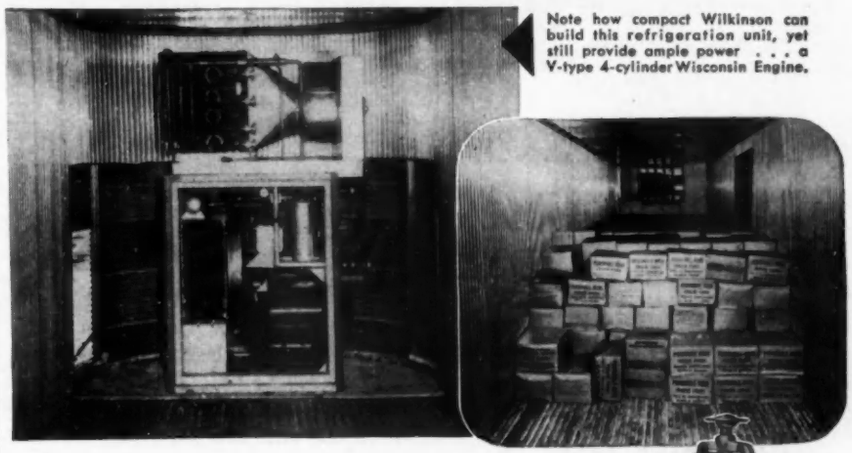
As the result of the tests, it was explained, there is evidence that a new type of oil can be specifically compounded to lessen the contribution of crankcase oil to the formation of deposits, and that it will permit more high-compression cars to be operated satisfactorily on currently available fuels. This oil was said to have superior characteristics because of the elimination of residual materials such as bright stock. It has been found also that the characteristics of residual stocks can be improved by dewaxing, deasphalting, and reresining, then extracting the aromatic materials with phenol to produce an extracted bright stock.

Superior results, however, were said to have been obtained by combining low-boiling neutral stocks with viscosity-improver additives. Increased octane requirements for high-compression engines then were reduced, it was explained, to one from 16 at full throttle and to five from 24 at part throttle.

END

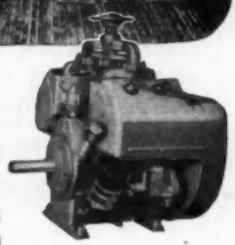
Please Resume Reading Page 73

California to Nebraska, Temperature Stays at -1°F



Note how compact Wilkinson can build this refrigeration unit, yet still provide ample power . . . a V-type 4-cylinder Wisconsin Engine.

Refrigeration Unit Is WISCONSIN-Powered



15 to 36 hp. V-type 4-cylinder models.

When frozen food must *stay frozen* on trips extending halfway across the continent, that's when refrigeration power must be dependable. A fact well-recognized by Wilkinson Manufacturing Co., Omaha, Nebraska, builders of this refrigeration unit. Power is provided by a V-type 4-cylinder Wisconsin Heavy-Duty Air-Cooled Engine.

Dependability in full measure is one of the most important characteristics of Wisconsin Engines. Tapered roller bearings at both ends of the shaft absorbing all thrusts mean no chance of bearing failure. Also, fool-proof air-cooling and matchless engine design are your assurance of *continuous*, trouble-free operation with minimum servicing and attention. Still another important factor, Wisconsin Engines are compact, light-in-weight, fit *existing new equipment* or equipment *now in use* with minimum design change. In fact, sometimes no changes are necessary.

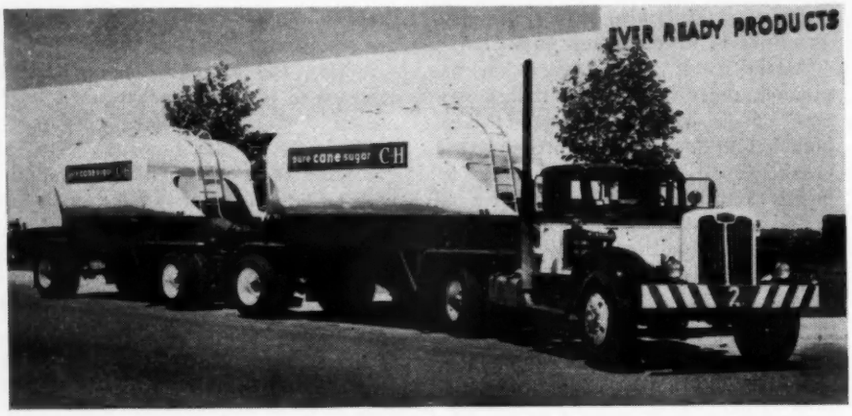
Write for new 64-page Wisconsin Engine catalog showing Wisconsin Engines *in action* on many machines — also detailed specifications about all 4-cycle single-cylinder, 2-cylinder and V-type 4-cylinder models, 3 to 36 hp.

WISCONSIN MOTOR CORPORATION

World's Largest Builders of Heavy-Duty Air-Cooled Engines

MILWAUKEE 46, WISCONSIN

A 7748



A Sweet, 24-Ton Load

Eight bottom-dump hopper semi-trailers were recently delivered to the California and Hawaiian Sugar Refining Co. for use in hauling sugar from their refinery in Crockett, Cal., to customers in various sections of the state. The hoppers are pulled in trains of two trailers each with a complete train capable of carrying in excess of 24 tons. Each train consists of two semi-trailers with one converter dolly. This to permit greater flexibility of operation since loads are often broken up at the delivery point leaving each trailer separate for delivery to a separate location. Manufactured by the Richmond division, Car Wood, Richmond, Cal., the bodies are constructed of high tensile steel with all welded construction and incorporate the new Car Wood beam and tank design.

WHEN IN DOUBT . . .
Consult your EBERHARD CATALOG

Investigate these
"LONG RUN"
items

HINGES
LATCHES
DOOR IRONS
DOOR CONTROLS
SEAT IRONS
LOCK HANDLES
SEAT PEDESTALS
REFRIGERATOR LOCKS
PANEL DOOR LOCKS
VAN BODY LOCKS
SLIDING DOOR LOCKS
LADDER HOLDERS, etc.

There's a wealth of important information in the Eberhard Catalog. Truck body hardware application problems confronting you may prove simpler after you see how the complete (E) hardware line readily lends itself to a multitude of practical uses. Accurate listing of hardware weights, sizes and specifications will prove valuable to designer and installer alike.

Write for your catalog today.

. . . for the
MOST COMPLETE LINE
of
TRUCK BODY HARDWARE
AVAILABLE

EBERHARD Long Run
TRUCK BODY FITTINGS
E
EBERHARD MANUFACTURING CO.
Division of the Eastern Malleable Iron Co. EVARTS AVENUE CLEVELAND, OHIO

Head and Gasket Problems

Continued from Page 73

erators may be using inferior materials but if they do, it probably is out of inexperience. In these days of such high labor costs, the cost of parts, in most cases, is of secondary importance. The most expensive or serviceable part is not always the cheapest part to use. For instance, the sodium filled valve is acknowledged generally as a superior valve if valve seat burning is the problem in that they outlast normal commercial valves by quite a margin.

However, in our fleet, it was found, with the use of sodium fill valves, that valve guides needed replacing each time the head was removed. Valve stem wear was really the problem. Since the normal production valves for this engine lasted until the average head change mileage, it was not economically feasible to use the sodium valves. We are now trying some experimental Inconel metal valves.

Those operators and fleet superintendents who are familiar with the damaging results of poor maintenance and operating practices are constantly on the alert to correct individual situations as they occur, even to going beyond factory recommendations when tests prove they are not adequate.

In some cases, fuels and oils and even water is sent to private laboratories to determine whether they are up to required specifications. Various inhibitors and detergents are used in water to avoid scale and sludge. Drivers receive road operating instructions from trained drivers supervisors to teach them how to operate engines to avoid failure. Bulletins are sent out regularly to cover any emergency situation.

END

Please Resume Reading Page 74

100,000 MILES WITH MOTORS UNTOUCHED USING CITIES SERVICE C-800 MOTOR OIL!

CONSTANTLY ON THE MOVE, Fleming delivers local and long distance for Pep Boys, one of the largest automotive supply houses in the East.

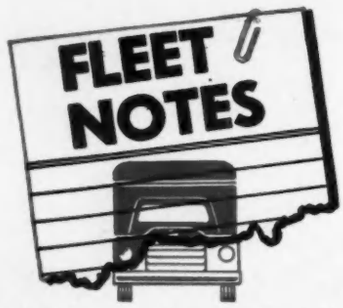
75,000 GALLONS OF CITIES SERVICE GASOLENE power Fleming trucks through the year. They find it's the best for mileage, power and economy.

Ten Fleming Tractors Pass The 100,000-Mile Mark With Heads, Pans, Wheel Bearings And Motors Untouched!

Of course, you expect a high-quality tractor to give you long-range trouble-free performance, but when you can get by the 100,000-mile mark without a bit of trouble with any of the "hot spots"... you're getting a lot of help from somewhere!

AND THAT'S HOW THE FLEMING PEOPLE FIGURE IT! They say, "A great deal of this success is due to using your C-800 Motor Oil, your Trojan A Greases and Cities Service Regular Gasolene. With 10 tractors, 12 trailers, you can readily see that operating economy is a must with us. With Cities Service Products, our operating costs have gone down and we're really happy."

MR. FLEET OWNER: Try the complete Cities Service line for your trucks or busses and enjoy a big operating savings. Call your nearest Cities Service office or write Cities Service Oil Co., Sixty Wall Tower, New York 5, New York.

CITIES SERVICE
QUALITY PETROLEUM PRODUCTS

McClain Dray Line, Marion, Ind., has announced a new 26-door, cross-dock terminal in Chicago.

Jocie Motor Lines, Inc., Atlanta, Ga., has opened a new terminal in Atlanta, Ga.

Carolina Southern Motor Express, Inc., Jacksonville, Fla., has opened two new terminals, one in Macon and one in Columbus, Ga.

Buckingham Transportation, Inc., Rapid City, S. D., has placed a third safety patrol car in operation. The fleet just won an award for safe operation in the statewide contest sponsored by Montana Motor Transport Assn.

Harold Klein Cartage, Inc., Milwaukee, Wis., has begun operations in a new 21-door, cross-loading dock there. The fleet has also been enlarged with the addition of reefer equipment.

Perkins Trucking Co., Inc., Maspeth, L. I., N. Y., has finished construction of a 22-door freight terminal in Hicksville, L. I., N. Y. Facilities include a 10-car railroad siding.

Motor Haulage Co., New York City, has opened its new terminal in Jersey City, N. J. In addition to full freight handling facilities, the new unit includes complete shop and maintenance equipment for 75 of the company's vehicles.

Consolidated Freightways, Portland, Ore., has announced the availability of 12 $500 college scholarships to high school seniors on a competitive basis in the 11 states served by the fleet.

Bekins Van and Storage Co. is constructing a five-story, 37,000-sq ft, $250,000 storage terminal at Pomona, Cal.

Chicago Transit Authority, Chicago, has completed preliminary plans for a $2,500,000 terminal and garage in the northwestern part of the city to serve as a base for 375 vehicles.

Allied Van Lines, Inc., Chicago, held its western regional meeting last month, Jan. 14-16, at Hollywood, Cal. Over 200 member-agents from 11 western states attended.

E. B. Libe, Inc., Phillipsburg, N. J., trucking firm, celebrated its 25th anniversary last year.

(TURN TO PAGE 156, PLEASE)

OUT OUR WAY

YOU SIT RIGHT DOWN HERE, BURL, AN' YOUR CAR WILL BE READY REAL QUICK!
I HOPE THE BOSS HAS THAT CHAIR NAILED DOWN! I CAN'T LOOK!
YEAH--IT'S HAPPENED BEFORE! IF WE DON'T GET SOL-SPEEDI-DRI ON THE FLOOR, WE'LL ALL WIND UP IN THE HOSPITAL!
THE SLIGHT SLIP
J.R.WILLIAMS

The perfect remedy for slick, oily floors

SOL·SPEEDI·DRI

For clean, slip-proof floors, you can't beat "dry cleaning" with Sol-Speedi-Dri. Industry buys more of it than any other oil and grease absorbent, because pound for pound, dollar for dollar, Sol-Speedi-Dri gives *more for the money*, all factors considered. Check your jobber, and you'll see what we mean. Send coupon today for free sample and literature.

Warehouse stocks maintained in principal cities of the United States and Canada.

•

Inquirers in New York, New England, and New Jersey should write to Speedi-Dri Corp. Elsewhere in U. S. to Waverly Petroleum Products Co., 1724 Chestnut St., Phila. 3, Pa. In Canada, G. H. Wood & Company Ltd., Toronto. Branches throughout Canada.

SPEEDI-DRI CORP.
210 W. Washington Sq., Phila. 5, Pa.

FREE SAMPLE:
Fill out the coupon and mail today for free sample and literature.

*Name*_____

*Address*_____

*City*_____ *State*_____

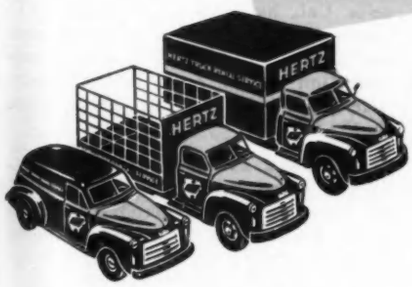
CCJ-2/54

Body Is All Doors

A new all-door motor truck body is designed to facilitate loading and expedite deliveries. Seven sets of double doors which form the side panels and rear, lend access to seven compartments inside the body so arranged to accommodate individual deliveries and speed loading and unloading. The doors, prefabricated and supplied by United States Plywood Corp., are constructed of Armorply a laminate with a metal facing bonded to one or both sides of a plywood core. The bodies are being built by the Economy Body Builders, Inc., Suffern, New York. Because of the door arrangement and the fact that the bodies are built close to the ground, trucks may be loaded with a fork lift carrier after the various items of each delivery have been assembled the night before on a pallet. Bodies are 13 ft long by 90 in. wide. Openings for the doors are 48 in. wide and 72 in. high.

when you need an extra truck Quickly!

Call HERTZ



Make no mistake about it! When you need an extra truck in a hurry . . . for peak loads or emergencies . . . Hertz Truck Rental Service saves you dollars . . . hours . . . and valuable good-will. Why buy extra trucks which often lie idle in "off-periods." Rent your extra trucks from Hertz for as long as you need them and pay only for as long as you use them. Hertz supplies all gasoline, oil, Public Liability, Property Damage, Fire and Theft Insurance and $100.00 deductible collision protection at no extra cost . . . everything but the driver . . . at low reasonable rates.

Hertz Truck Rental Service is easy to get . . . complete . . . convenient

LONG TERM LEASE. Hertz' Truck Lease Service, for one truck or a fleet, is a proved plan that releases capital investment, and yet gives every single advantage of ownership at a cost often less than ownership.

Who can rent from Hertz? Large corporations, small companies and individuals, too, rent trucks from Hertz. You need only a driver's license and normal identification to rent exactly the kind of truck you need for your specific job. In most of the more than 550 cities in the nationwide Hertz System, fleets of ½ ton, 1 ton, 2 ton, pickup, panel, van and stake body trucks are available and are always kept in excellent condition.

How much red tape? None at all! Accredited business firms simply call on the phone, make arrangements, send a driver for the truck. Call your Hertz station any time and rent a truck. In a matter of minutes you or your driver will be on the way.

You pay only for actual time and mileage . . . with no hidden charges of any kind.

How small the cost? For example: the rate for the use of a 1½ ton van truck for 8 hours in Nashville, Tennessee, is only 75 cents per hour, plus 9 cents per mile, including gasoline, oil and insurance. Thus, the total cost for a 30 mile trip is only $8.70. Rates lower by the week or on a long-term lease. (In some cities, the rates may vary slightly from the above example.)

For complete information about either short-term renting, or long-term leasing, call your nearest Hertz station, or write to the address below. Learn the FACTS! You'll profit!

LOOK IN YOUR TELEPHONE DIRECTORY UNDER "H" FOR YOUR NEAREST HERTZ STATION.

Dept. 524, 218 S. Wabash Ave., Chicago 4, Ill.; phone: WEbster 9-5165 **HERTZ** *Truck-Rental* **SYSTEM**

Blackhawk announces its

NEW G.V.W. JACK DESIGN

The most dependable jack line ever built **now offers EVEN MORE stamina to handle today's greater G.V.W.'s, greater lifting spans and broader range of hydraulic jack applications.**

Whatever the rig and its G.V.W. (gross vehicle weight), there's a newly designed Blackhawk Hydraulic Jack with the right capacity and lift—to handle the job more quickly and surely—without need for blocking up or unloading.

Stronger plungers resist side strains. Longer screw extensions fit all axle heights
New tough malleable iron top cap supports off-center loading and gives solid rigidity to entire jack.
Improved, oversize malleable iron pump beam takes abuse and reduces wear.
Improved long-lived steel pump with micro-finished steel housing—not a casting. Readily replaceable

DESIGN IMPROVEMENTS

other than those captioned (at right) are: ONE HANDLE now fits all models, 3 through 20 tons; and 68% of all parts for these models are also INTERCHANGEABLE — assuring lower maintenance and repair expense. You get FULL PUMP ACTION with every stroke because of new self-centering ball check design.

Only by Standardizing

on Blackhawk can you get the benefits of this new "G.V.W. Jack design," cut your overall Jack costs and insure more dependable performance. 1½ to 100-ton capacities. Order from your Blackhawk Jobber.

Only Blackhawk Jacks are tagged with the "Service Proved" Seal

DEPENDABILITY SEAL OF Service Proved QUALITY PERFORMANCE

BLACKHAWK®

A Product of Blackhawk Mfg. Co., Dept. J-1124, Milwaukee 1, Wis.

For 26 years, majority of shops winning "Bus Transportation" maintenance awards choose Blackhawks.

Fleet Notes

Continued from Page 154

Interstate Motor Freight System, Grand Rapids, Mich., reports a 12½ per cent gain in business volume in 1953 as compared to 1952. Gross for 1953 was about $26 million, with $29 million expected this year.

Security Cartage Co., Fort Wayne, Ind., has doubled the size of its Cincinnati, Ohio, terminal, boosting it from 16 to 32 dock doors.

Herr's Motor Express, Quarryville, Pa., is sponsoring an essay contest on "What the Motor Truck Has Done for the Farmer" among the junior class students majoring in agriculture at the local high school. Prize is a feeder steer.

West Coast Fast Freight Inc., Los Angeles, Cal., has put its Los Angeles drivers through a series of psychophysical tests using equipment made available by **General Petroleum Corp.**

Mohawk Motor Lines, Nashville, Tenn., has begun service using the new compartmentalized trailers recently built for the fleet by **Fruehauf Trailer Co.** The design was originated and patented by Mohawk President Jack P. Wehby. The trailer is divided in three compartments by movable bulkheads, adjustable to vary compartment size from 2 ft up. Each compartment has individual temperature controls.

Taylor Express Co., Haverhill, Mass., celebrated its 35th anniversary last year.

System Tank Lines, Inc., Los Angeles, Cal., has been authorized by ICC's Division 4 to purchase operating rights and certain property of **Lang Transportation Corp.** and California intrastate rights of **Manning Tank Lines, Inc.**

Strickland Transportation Co., Inc., Dallas, Texas, has formally opened its new Houston, Texas, terminal. Its 240 by 60 ft dock has 42 individual loading bays.

Garrett Freightlines, Inc., Pocatello, Idaho, has extended its operations about 1000 miles east to Denver, Colo., and southeast to Gallup, N. M., through purchase of **Moab Transportation Co.** The deal has ICC approval.

California Cartage Co., Los Angeles, Cal., has moved into its new terminal there. Dock has space for 40 trucks and eight railway cars.

Rupp Trucking Co., Inc., Middletown, N. Y., has announced four $500 scholarships available to essay winners in the carrier's area. Topic is "Transportation and the Trucking Industry in the United States."

Continental Transportation Lines, Inc., Pittsburgh, Pa., has moved into its new Cincinnati, Ohio, terminal. Dock capacity is rated at 30 million pounds per month.

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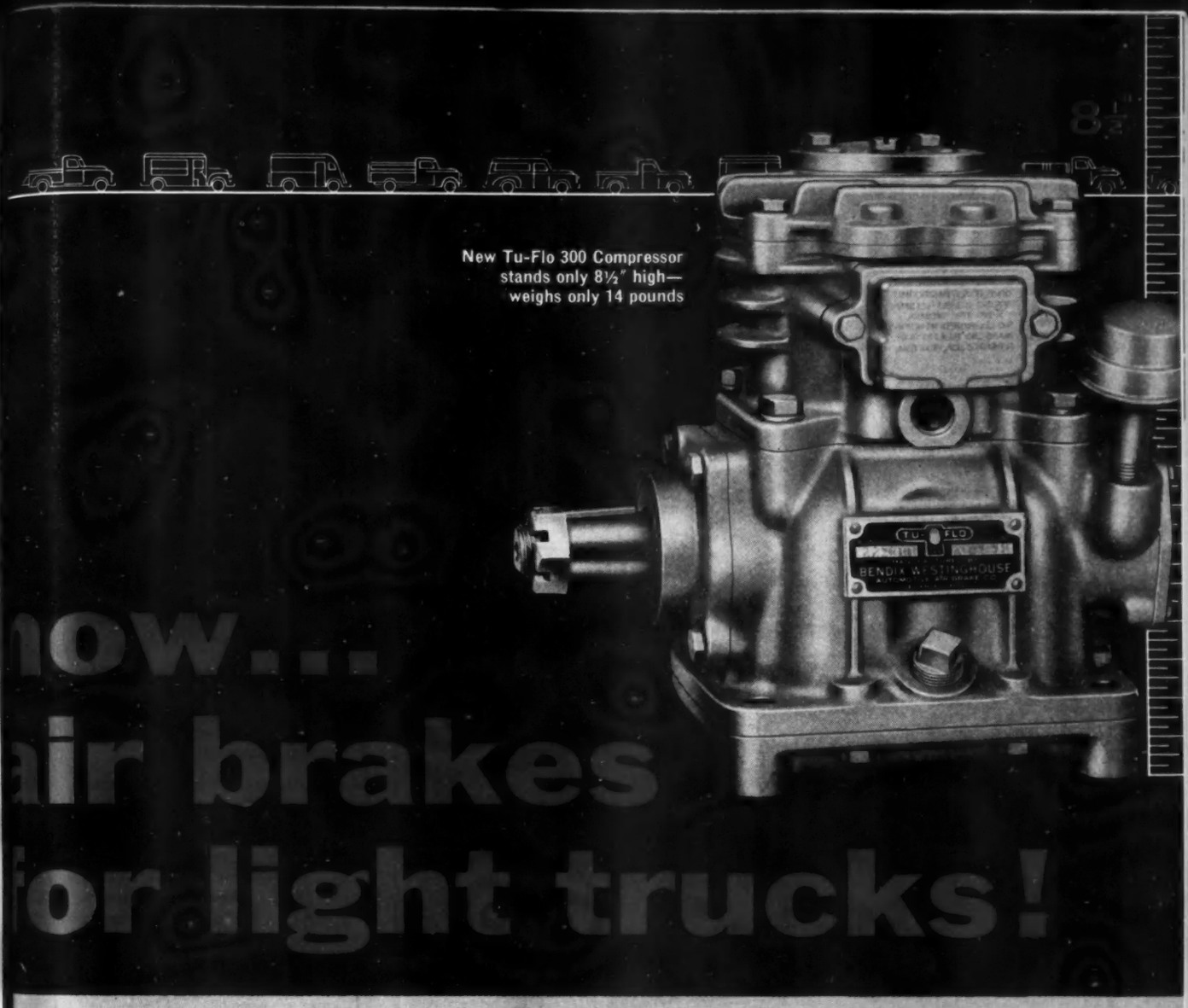


now...
air brakes
for light trucks!

ew small-size Bendix-Westinghouse TU-FLO Compressor
ings the extra power, faster action, greater
onomy of air braking to the lightweight field!

New Type E
Treadle Brake Valve

New Air-Hydraulic
Actuators

, operators of lightweight trucks can cash in on all the benefits
e world's most effective and efficient braking power—AIR! Yes,
you can enjoy the faster, smoother, more effortless stops and
tive braking control possible only with air brakes. You'll enjoy
ed reliability and economy, too, for actual fleet records prove
intenance costs of air brakes are lower than any other type of
king system.

FLO 300 COMPRESSOR—GIANT IN PERFORMANCE, MIDGET IN E! This new Bendix-Westinghouse two-cylinder reciprocating
on-type compressor makes the lightweight system possible.
nds less than 8½ inches high, weighs only 14 pounds. Is quiet
ning, air-cooled and has new unloading mechanism and new
gn inlet valves.

NEW TYPE "E" TREADLE BRAKE VALVE—Drivers like the "feel" of this new valve—a slight foot depression and AIR does all the work. Full-graduating characteristics provide for safer, surer braking at all times.

NEW AIR-HYDRAULIC ACTUATORS—A new line of these actuators assures a proper size and mounting to suit all hydraulic master cylinder requirements. Compact, dirt-proof, require no lubrication and practically no maintenance.

NOW AT YOUR BENDIX-WESTINGHOUSE DISTRIBUTORS—This new system is available in handy, easily installed kits designed to fit every make and model lightweight vehicle. Stop in and take a demonstration ride today!

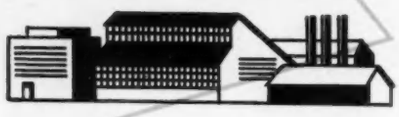
THE BEST BRAKE IS AIR . . . THE BEST AIR BRAKE IS *Bendix-Westinghouse*

BENDIX-WESTINGHOUSE AIR BRAKES REG. U.S. PAT. OFF.

BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY

GENERAL OFFICES & FACTORY: ELYRIA, OHIO • BRANCHES: BERKELEY, CALIF., OKLAHOMA CITY, OKLA.

FACTORY FLASHES



Federal-Mogul Corp., Detroit, and **Bearings Co. of America**, Lancaster, Pa., have developed plans for a merger to be voted on by stockholders of both companies early this month. If the present plan is adopted, Bearings Co. of America will continue operation as a division of Federal-Mogul Corp.

Trico Products Corp. has a $250,000 research and engineering building in the works. It will be built near the company's Buffalo, N. Y., plant.

Trailmobile, Inc., Cincinnati, Ohio, has opened a new factory branch in Dayton, Ohio, just off state route 25.

Caterpillar Tractor Co., Peoria, Ill., has established a new parts depot in Denver, Col. It is expected to be in operation about Feb. 1, 1954.

Bonney Forge and Tool Works, Allentown, Pa., recently held a two-day sales meeting highlighted by a panel discussion by four jobber customers.

Strick Co., Philadelphia, recently purchased a tract of land in **Bucks** county, north of Philadelphia, to allow for future expansion. The company also took full page ads in the local papers to promote used trailer sales.

Studebaker Corp., South Bend, Ind., has created a new division charged with coordinating plans and procedures for engineering, production and sales of commercial vehicles.

Thompson Products, Inc., Cleveland, Ohio, plans to spend $16 million this year for expansion of its manufacturing facilities.

Fram Corp., Providence, R. I., has purchased **Warner Lewis Co.**, Tulsa, Okla. It will continue filter and fuel separator production as a division of Fram.

Willard Storage Battery Co., Cleveland, Ohio, has merged with **Electric Storage Battery Co.**, Philadelphia. Operation will continue as a division of Electric Storage Battery.

Trailmobile, Inc., Cincinnati, Ohio, has opened a new $500,000 sales and service facility in **East Oakland, Cal.**

Fruehauf Trailer Co., Detroit, has opened its plant in Westfield, Mass., purchased last March from **Brown Equipment Co.**, for eastern seaboard production of "CarAvan" aluminum trailers.

Standard Steel Spring Division, Rockwell Spring and Axle Co., will build a $600,000 addition to its Los Angeles, Cal., plant.

Maremont Automotive Products, Inc., has acquired all outstanding common stock of **Pratt Industries, Inc.** Facilities for manufacture of exhaust system parts will be moved to Maremont's Harvey, Ill., plant and operated as a Maremont division.

Walker Mfg. Co. of Wisconsin, Racine, Wis., has obtained, for expansion, the former **Kaiser Motors Corp.** plant at Jackson, Mich.

Rollins Fleet Leasing has opened a New York City office at 550 Fifth Ave., New York City.

Heli-Coil Corp., Danbury, Conn., has entered the automotive aftermarket with appointment of three distributors in the New England area—**Chas. Friedman Co., Inc.**, Bridgeport, Conn.; **Harry Harris Co., Inc.**, Danbury, Conn.; and **New Haven Body Bldg. Co.**, North Haven, Conn. Additional appointments are expected.

Titeflex, Inc., Newark, N. J., has announced a new sales office for the state of Michigan in Room 641, Book Bldg., 1249 Washington Blvd., Detroit 26, Mich.

The Heil Co., Milwaukee, Wis., has moved its eastern district offices to 2095 Route 22, Union, N. J.

You Can't Deny
It's Easy to Apply and Makes Two Doors as Solid as One
HANSEN
for
VITAL SPOTS
Modern, symmetrical, attractive; strong, durable, easy-gripping, Hansen Handles are suitable for rear, side or cab doors and are easy to apply.
A Great Deal Hinges on the Right Hardware!
SQUARE CORNER HINGES
made by Hansen are fastened to side of body. They permit door to swing wide open, flush with side of body. They provide loading space the full width of body. Made of strong, durable, three-ply all-steel, with hardened steel thrust bearings. Two lengths—16" and 19". Width 2¾". Butt 5½" high, 4½" wide. Weights, 6¾ and 8 lbs.
HANSEN HANDLES
Illustrated is Hansen No. 73 Handle and Escutcheon. Specially designed for use with all small locks with standard 5/16" square bushing. Uses padlock supplied by user. Handle, 7" long, with 4¼" grip. Shank 5/16" square, 3⅞" long. Hansen makes many other types of Handles. Full details about them in catalog sent on request.
REAR DOOR AND SIDE DOOR LOCKS
are available from the Hansen line for all types of doors—large or small, single or double. Included are rotary door, rotary and take-up; slamming, slam-and-take-up; heavy-duty; refrigerator. Hansen also makes other types of locks for many and varied applications in body construction. CATALOG WITH COMPLETE DETAILS ON REQUEST.
FOR COMMERCIAL BODY AND INDUSTRIAL USE
Hansen is noted for its ruggedness, strength, durability, and trouble-free operation. Its use is not confined to commercial bodies, tanks, trailers, etc., but includes industrial uses on doors of power concrete mixers, power shovels, substation cabinets, locomotives, etc.
NEW ONE-UNIT LOCK
New in the Hansen line is the No. 106-L one-unit Lock. Flush Handle and rods are integrated. Lock comes complete, ready and easy to install. Other new Locks and Handles have been recently added and are now available.
REQUEST NEW FOLDER No. 90
REQUEST CATALOG
Hansen
The Hardware for Hard Wear
HANSEN
HARDWARE for Commercial Bodies
A. L. HANSEN MFG. CO.
5047 RAVENSWOOD AVE.
CHICAGO 40 ILL.

"Smoother operation!"

"Cleaner engines!"

"Lower oil consumption!"

...since using Gulflube Motor Oil X.H.D.

Shown here (in shirt sleeves) is Mr. Clarence D. West, general manager of Spotless Stores, Inc. This chain of stores operates a fleet of thirty-eight trucks and seven cars. For over 18 months this fleet has used Gulflube Motor Oil X.H.D. and Gulf Motor Flush.

Mr. Max Denberg, president of Spotless Stores, Inc., writes as follows:

"Just about a year has passed since we changed to Gulflube Motor Oil X.H.D. in our fleet and we are pleased to advise you that we have obtained *smoother fleet operation*, *cleaner engines* and *lower oil consumption* through its use.

"Before changing, we used Gulf Motor Flush and on one engine which we dismantled for test, found that Gulf Motor Flush had fulfilled all claims made for it."

How to give dirty engines Gulf's famous 1-2 punch

1 Clean 'em out with Gulf Motor Flush!

Gulf Motor Flush is powerful! It goes to work instantly, dissolving and washing away sludge, varnish and lacquer deposits from rings . . . valve stems . . . oil lines . . . screens . . . and oil pans. And it is *not* corrosive!

Here's another important fact about Gulf Motor Flush. *No dismantling is necessary!* Use it to get more miles out of rings and keep repair bills down.

2 Keep 'em clean with Gulflube Motor Oil X.H.D.!

Gulflube Motor Oil X.H.D. has the *right* combination of the *right* additives to keep engines clean while it protects them against excessive wear. It prevents the formation of sludge and varnish—prevents rust, too.

You'll find your engines use less oil . . . require fewer overhauls and repairs. Switch to Gulflube Motor Oil X.H.D. right now!

New Product Descriptions

Continued from Page 91

is silvered plate glass, gasketed against weathering, cushioned against breakage in heavy steel black enameled frame. Five oversize adjustable steel tube support arms and heavy construction keep the big clear image from dancing.

P15. Battery Charger

The Associated Equipment Corp., St. Louis, Mo., has just announced a new carry-around 12-volt rapid battery charger. A safety system automatically shuts off the charger if anything causes excessive operating temperatures. It will also stop the machine and signal operator if charger is mistakenly connected to a 6-volt battery, or if battery is hooked up backward. It delivers a

powerful 40-amp charge that will start practically any 12-volt vehicle in 1 minute. A toggle switch also changes the machine to a slow charger that will handle up to 6 batteries if connected in parallel. Both the fast and slow charge positions have three charging rates.

P16. Turn Signals

A new group of safety directional signals has been introduced by Turnsignal Corp., Philadelphia. These new signals offer approximately 50 per cent greater illumination area than before. They are light-weight and ruggedly constructed for long service under adverse operating conditions.

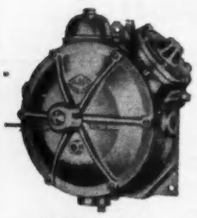
(TURN TO PAGE 164, PLEASE)

Hoist Shifts Weight Forward

A new front-mounted telescopic truck hoist is now being marketed by Hercules Steel Products Corp., Galion, Ohio. Designed especially for heavy-duty dump truck bodies 11 to 15 ft long, this 20-ton capacity hoist shifts hoist weight forward. Thus more load is on the front axle, making possible maximum per-axle loads. Manufactured for single or tandem axle straight trucks, it is mounted with no part of the hoist extending below the truck frame.

with LP-GAS...the modern fuel

Thousands of truck owners and bus operators have found that LP-Gas is the answer to their engine overhaul problems. LP-Gas is a dry burning fuel that does not dilute the oil or cause washdown of cylinder walls. Case history after case history on trucks and busses have shown longer engine life, fewer oil changes, lower upkeep and *savings in fuel costs.*



ALGAS 1570-E CONVERTER WITH ELECTRIC PRIMER

ALGAS 1600 MIXER

ALGAS is a pioneer in the LP-Gas field. We have engineered carburetion conversion equipment for the trucks or busses you own. Investigate the many advantages of LP-Gas today. Write now for our informative folder, "LP-Gas... the modern fuel."

AMERICAN LIQUID GAS CORPORATION
1109 Santa Fe Avenue • Los Angeles 21, California

Only COLE-HERSEE *offers* a VOLTAGE CONTROL UNIT

THAT *DOES NOT* DIMINISH BRILLIANCE OF STOP & TAIL LIGHTS WHEN 12 VOLT TRACTOR IS HOOKED UP TO A 12 VOLT TRAILER

NO. 30008 VOLTAGE CONTROL UNIT reduces 12 volt tractor system to 6 volt trailer operation with manual, variable control for required number of marker lights.

For a 12 volt system, plug is inserted directly in 12 volt socket — no adjustment of pointer knob is necessary. Stop lamps and tail lamps do not dim when 12 volt tractor is hooked up to a 12 volt trailer.

Assures positive electrical contact, minimum loss — maximum candle power in all lights on trailers.

This is not a rheostat — it's a multiple, heavy duty fixed contact switch that controls known units of resistance.

Theft-proof & tamper-proof construction. Extra heavy duty tabs with ½" hole to accommodate padlock.

16
6 - VOLT BULBS
12
6 - VOLT BULBS
20
6 - VOLT BULBS
8
6 - VOLT BULBS
24
6 - VOLT BULBS
FOR 6 VOLT EQUIPPED TRAILERS SET POINTER KNOB TO NEAREST LOW NUMBER OF LAMP BULBS USED AND INSERT CONNECTOR PLUG IN 6 VOLT SOCKET.
CAUTION: MAKE THIS SETTING BEFORE CONNECTING PLUG TO SOCKET.
FOR 12 VOLT EQUIPPED TRAILERS INSERT CONNECTOR PLUG DIRECTLY INTO 12 VOLT SOCKET. NO ADJUSTMENT OF POINTER KNOB IS NECESSARY.
12 V. TRAILER
COLE-HERSEE COMPANY
BOSTON, U.S.A.
6 V. TRAILER

SOCKETS TAKE STANDARD 6 POLE PLUG

Manufactured by Cole-Hersee Company, the leading manufacturer of truck and trailer electrical equipment.
This unit embodies the technical and quality characteristics for which Cole-Hersee is famous.

THE INSIDE STORY OF THE COLE-HERSEE VOLTAGE CONTROL UNIT

Famous COLE-HERSEE QUALITY CONSTRUCTION THROUGHOUT

- Wiring & connectors are insulated from resistance units by a high heat-resistant glass insulating material.
- Silver inlaid contacts and contactors.
- Special construction assures heat dissipation.
- Rugged mechanical and electrical design.
- Genuine Nichrome wire resistors encased in ceramic.
- Resistors are welded to terminals.

Height – 8" — Width – 6¾" — Depth – 2¾"
Cable Length – Four Feet
Weight – 5 lb. Including Cable

COLE HERSEE COMPANY 20 OLD COLONY AVENUE BOSTON 27, MASS., U.S.A.

New Products

Continued from Page 162

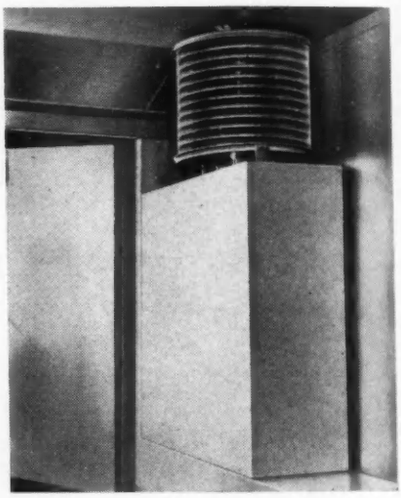
Distinctive and functional in appearance, and not just a round lamp, each signal provides clear direction indication at a glance. Prismatic Plexiglas lenses—furnished in red or amber—have high impact strength and will not shatter, fade or corrode. They exceed SAE recommendations, have been tested and approved by Electrical Testing Laboratories, and approved in most all states. They are available individually or in sets for body or fender mounting.

P17. Mounting Bracket

A new mounting bracket for both the "Hitch-Hiker" power brake hose tender and break away valve can be installed on any make tractor in 5 to 10 min without drilling a single hole, is announced by Franklin Industries, Acton, Ind. The mounting is a bridge type bracket made of heavy gage angle iron. It clamps securely to the flange section of the tractor frame. The bracket is adjustable to fit any make or model tractor, regardless of frame width. Predrilled holes in the bracket accommodate the "Hitch-Hiker" hose tender, Wagner or Sealco break-away valve, and the Berg Vari-Volt trailer light control.

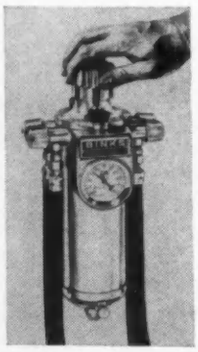
P18. Milk Cooler

An all-electric milk delivery cooling unit incorporating a new principle of temporary and overload control is in production by Allen Cooler Division, Production Planning Co., Detroit. The new unit employs an overload control valve which works in conjunction with a thermostat for temperature control. This valve introduces the new principle



of overload control by throttling the flow of refrigerant gas to the compressor whenever either the evaporator pressure or head pressure exceeds normal operating conditions. Whenever the desired temperature is obtained, the thermostat permits the valve to again throttle the flow of refrigerant.

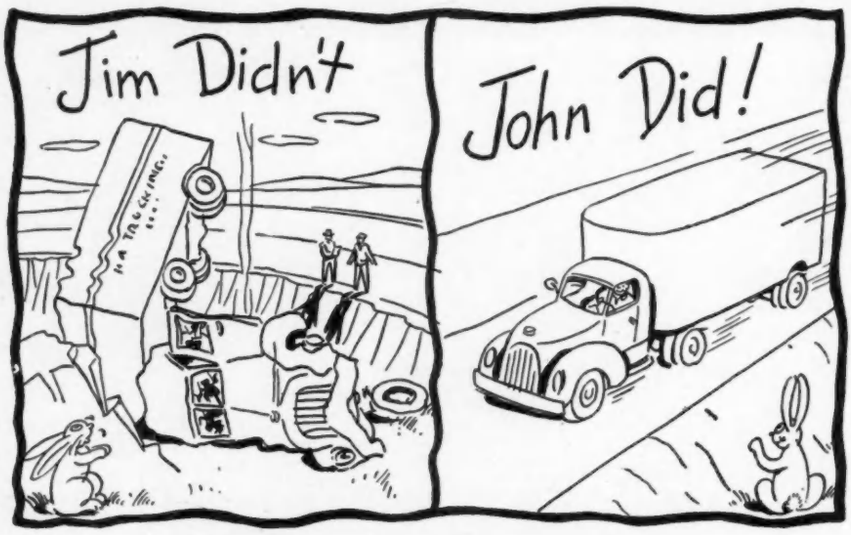
P19. Oil, Water Extractor



An improved oil and water extractor for use on spray painting air lines is announced by the Binks Mfg. Co., Chicago. Major improvements claimed for the Model No. AO-120 Oil and Water Extractor are: (1) more efficient air cleaning, (2) easier operation, and (3) longer life and lower maintenance costs.

END

Please Resume Reading Page 93



It Pays to Be Sure!

INSIST UPON Authorized

MAGNAFLUX* INSPECTION

WITH EVERY OVERHAUL!

● Authorized MAGNAFLUX inspection is your best safeguard against accidents and high-cost failures. It is the same inspection used by automotive companies to detect defects in parts and materials during their manufacture. It is the only completely reliable test during overhaul to make sure that steering spindles, crankshafts, connecting rods and differential gears are free from cracks—safe to go back into service in your equipment. For longer, safer, lower cost service between overhauls, insist upon genuine inspection with MAGNAFLUX; nationally available exclusively through Authorized MAGNAFLUX Overhaul Shops.

Fluorescent Magnaglo indication, as discovered on crank throw. Glowing line marks non-visible crack very near to final failure.

Magnaglo inspection of this steering spindle gives clear indication of otherwise invisible serious cracks that could cause failure.

MAGNAFLUX CORPORATION

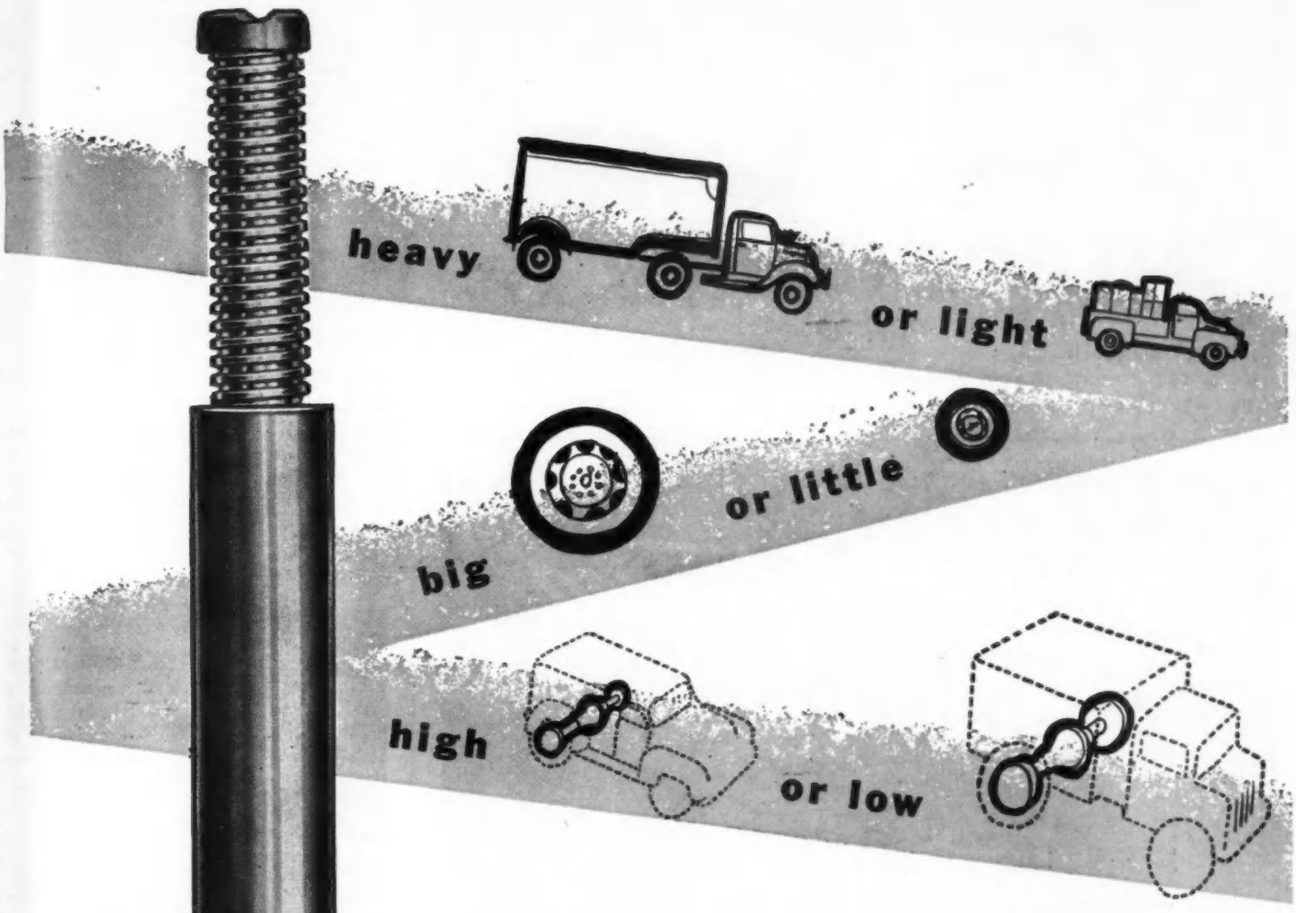
DETECTS DEFECTS

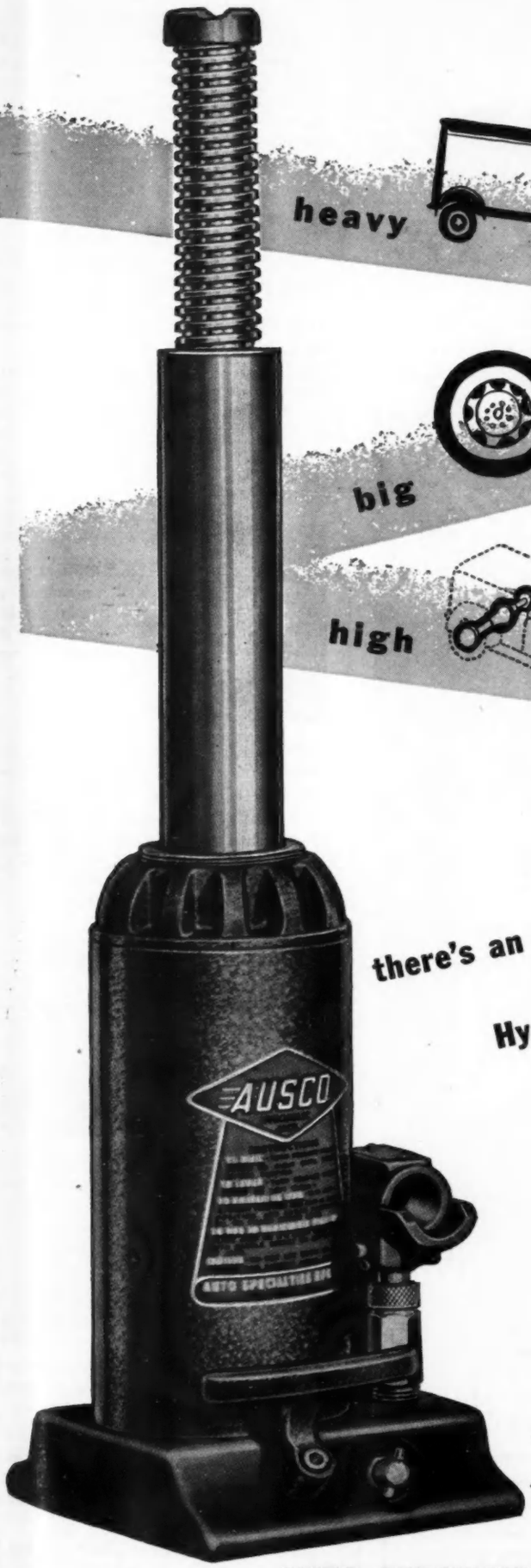
MAGNAFLUX CORPORATION

7308 West Lawrence Ave., Chicago 31, Illinois

New York 36 • Pittsburgh 36 • Cleveland 15
Detroit 11 • Dallas 9 • Los Angeles 58

*T.M. Registered U.S. Patent Office





there's an **AUSCO**

Hydraulic Axle Jack

that's **RIGHT** for each!

You have your pick from a really complete line of hydraulic axle jacks when you choose AUSCO. Capacities are available from 1½ to 20 tons; there are standard-range models and hi-range jacks which give you those extra inches that often make the job so much easier. Send for latest 1954 Ausco Jack Catalog.

B543

AUTO SPECIALTIES MFG. CO., Dept. CC2, St. Joseph, Mich.

INTRODUCING . . .

. . . **Matthew J. Betley,** promoted to vice president and general manager, Aeroquip Corp., Jackson, Mich.

. . . **Archie H. Bean,** appointed Seattle representative, Neapco Products, Inc., Pottstown, Pa.

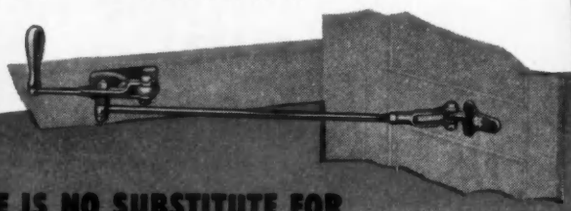
"Cleveland forged"

DOOR CONTROLS

No. 2321-A
A DELUXE PIVOT BEARING
TYPE DOOR CONTROL

New items constantly being engineered and developed for the Automotive trade.

No. 2322-A
SPECIAL DESIGN FOR
SCHOOL BUSES



"THERE IS NO SUBSTITUTE FOR THE STRENGTH AND DEPENDABILITY OF FORGED EQUIPMENT"

THE CLEVELAND HARDWARE AND FORGING COMPANY
3264 East 79th Street, Cleveland 4, Ohio
Our 72nd Year of Business

Send coupon for complete Catalog No. 24

The Cleveland Hardware and Forging Company
3264 East 79th St., Cleveland 4, Ohio
Please send me complete Catalog No. 24
Name_____
Company_____
City_____ Zone____ State_____

. . . **Thomas D. Brislin, Ross M. Godshalk, Herman H. Mesick, Thomas W. Nugent, Eugene A. Rees, Frank A. Tiedge** and **Thomas A. Tingle** promoted to managers in the Kansas City, Chicago, New York, Dallas, Memphis, Detroit and Atlanta divisions respectively, Dodge Division, Chrysler Corp., Detroit.

. . . **Meyer J. Butensky,** elected president, Branch Motor Express Co., New York City.

. . . **H. O. King,** elected president, Brockway Motor Co., Cortland, N. Y.

. . . **A. T. Cousins, R. E. Brown, Bernard Brunel, H. G. Foote, G. W. Frey, F. C. Meehling, J. W. Collins, R. C. Soliday, M. F. Barto** and **R. J. Thomas** appointed managers in the Chicago, Des Moines, Montreal, New York City, Philadelphia, Cincinnati, Denver, Seattle, Los Angeles and Memphis districts respectively, Spark Plug Division, Electric Auto-Lite Co., Toledo, Ohio.

. . . **Ralph M. Burard,** promoted to truck sales department manager, International Harvester Co., Chicago.

. . . **William T. Whitten,** appointed Sacramento, Cal., district representative, Auto-Lite Battery Corp., Toledo, Ohio.

. . . **Clyde W. Spangler,** appointed western division manager, Ringsby Truck Lines, Inc., Denver, Colo. He was Northern Transportation Co. vice president in charge of operations.

. . . **David A. Coulter,** appointed sales and advertising director, Willard Storage Battery Co., Cleveland, Ohio.

. . . **John J. Hannan,** appointed southwestern United States sales representative with headquarters in San Antonio, Texas, Perfection Steel Body Co., Galion, Ohio.

. . **Joseph M. Creed** and **John B. Hulse,** elected chairman and vice-chairman respectively, administrative committee, National Highway Users Conference, Washington, D. C.

. . . **Louis H. Lundstedt,** promoted to catalog line sales manager, Cleveland Hardware and Forging Co., Cleveland, Ohio.

. . . **Walter G. Schilling,** promoted to welding division sales manager, and **Earl S. Osburn,** promoted to battery charger division sales manager, Marquette Mfg. Co., Minneapolis, Minn.

. . . **F. W. Wilkening,** elected president, Wilkening Mfg. Co., Philadelphia.

(TURN TO PAGE 170, PLEASE)

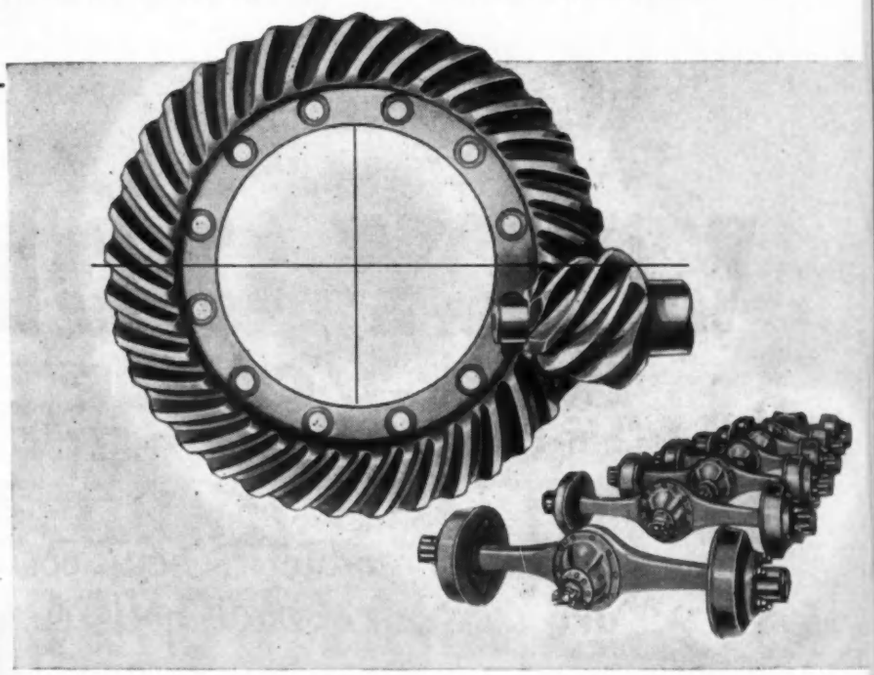
You're hauling perishables . . . you want axles you're sure of . . . that will get the payload on the road and keep going with plenty of power and speed . . . at low engine r.p.m. You want low maintenance costs, few repairs, little shoptime . . . long truck life and toughness. Your answer is Timken-Detroit "Torture-Tested" axles.

You're an intercity hauler . . . you want axles with pulling power *plus* speed—under any conditions . . . without beating the engine to pieces. You want economical, dependable performance and low upkeep . . . little downtime for repairs . . . long truck life. All these you can have in Timken-Detroit "Torture-Tested" axles with Hypoid gearing.

You're a contract hauler . . . you want dependable axles that will take you anywhere you need to go. You want power and speed where it counts . . . at low engine r.p.m. You want low maintenance and repair costs . . . little shoptime. You want to make money. You want Timken-Detroit "Torture-Tested" axles with Hypoid gearing!

eating

mken has it!



TIMKEN *Detroit* **AXLES**

TIMKEN DETROIT AXLE DIVISION
ROCKWELL SPRING AND AXLE COMPANY
DETROIT 32, MICHIGAN

The Accepted DA CO Standard
TRADE MARK REGISTERED

"TORTURE-TESTED"
to *Save Money on the Job*

WORLD'S LARGEST MANUFACTURERS OF AXLES FOR TRUCKS, BUSES AND TRAILERS

Next truck you buy . . .
insist on Timken-Detroit Hypoid gearing

Hypoid gearing for truck axles was pioneered by Timken-Detroit.

Proved in billions of ton-miles of actual operation. Designed to give the slower gear ratios necessary for modern engines without loss of strength. Pinion is bigger, stronger . . . bearings are larger . . . more teeth in contact reducing loading per unit of contact area. Torque transmitting capacity increased to step up performance and rugged power.

Get interchangeability, too!

Only Timken-Detroit has Hypoid gearing in a complete "family" of 7 basic axle capacities—in the entire range of medium and heavy-duty requirements. This advanced-related design incorporates the same features of construction and interchangeability in single-speed; single-speed double-reduction; and two-speed double-reduction final drive units.

Plants at: Detroit, Michigan
Oshkosh, Wisconsin • Utica, New York • Ashtabula, Kenton and Newark, Ohio • New Castle, Pennsylvania

Introducing . . .

Continued from Page 166

. . . **John E. Brown,** appointed north central territory district manager, St. Paul Hydraulic Hoist Co., Minneapolis, Minn

. . . **William Whitman,** appointed salesman for Pa., Del., Md., and D. C., U. S. Axle Co., Pottstown, Pa.

. . . **Jack Bernard,** as coordinator of regional sales activities, **Jack Rensel,** as eastern Pa., N. J., Md. and Va. representative, **William Monroe,** as western Pa., Ohio, West Va. and Ky. representative, **Nathan Goldberg,** as New England and N. Y. representative, **Marvin Oakes,** as southeastern states representative, and **Roger M. Stienecker,** as midwestern states regional manager, Gramm Trailer Corp., Lima, Ohio.

. . . **C. R. Munsch** and **H. P. Mills,** appointed district representatives in the Chicago and Portland Sales Districts respectively, Prest-O-Lite Battery Corp., Toledo, Ohio.

. . . **Charles P. Hoffman, Jr.,** formerly service engineer, Mack Mfg. Corp., appointed automotive engineer, and **Roy H. Stewart,** promoted to operations engineer and acting secretary of Terminal Operations Council, American Trucking Assns., Washington, D. C.

. . . **George U. Matthews,** named Cleveland regional manager, and **Paul P. Trainor,** named New York manager, AC Spark Plug Division of General Motors Corp., Flint, Mich.

. . . **Marshall R. Chambers,** promoted to general sales manager, Kent-Moore Organization, Inc., Detroit.

. . . **John A. Reid,** promoted to Chicago district sales manager, Seiberling Rubber Co., Akron, Ohio.

. . . **Selby F. Greer,** named vice president and manager, Automotive Division, Van Norman Co., Springfield, Mass.

. . . **Virgil T. Hyatt,** promoted to vice president in charge of operations, Wheaton Van Lines, Inc., Indianapolis, Ind.

. . . **Al Grimaldi,** promoted to assistant sales manager in charge of Auto-Steam Cleaner Division, Aeroil Products Co., South Hackensack, N. J.

. . . **Lester Boyce,** as chairman of the board of directors, **Arthur F. Hallat,** as president, and **T. H. Kennedy,** as assistant to the president, Boyce Motor Lines, Inc., Canandaigua, N. Y.

. . . **Horace W. Atheron,** promoted to general manager, Halls Motor Express Co., Paterson, N. J.

. . . **Harry L. Grubbs, Jr.,** elected president and general manager, Jacobs Transfer Co., Inc., Washington, D. C. and Jacobs Transfer Co., Baltimore, Md.

. . . **Charles A. Hall,** promoted to service department sales manager, Cleveland Hardware and Forging Co., Cleveland, Ohio.

. . . **Joseph McMahon,** promoted to general manager, Liberty Motor Freight Lines, Inc., Buffalo, N. Y.

. . . **John E. Burris,** Burris Food Distributors, Milford, Del., elected president, Delaware Motor Truck Assn.

. . . **G. E. Paschall,** promoted to general manager, East Texas Motor Freight Lines, Dallas, Texas.

(TURN TO PAGE 172, PLEASE)

Crescent

WIRY JOE

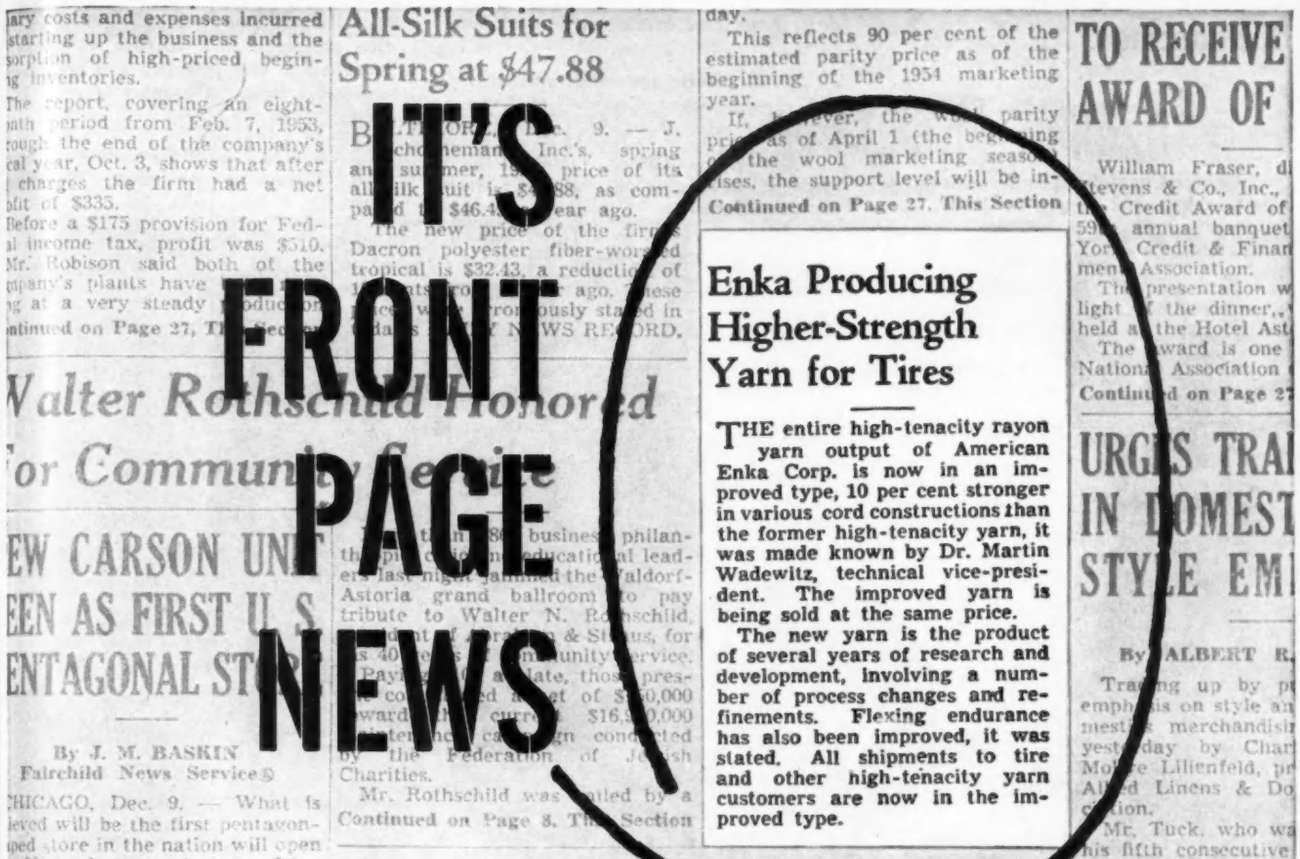
WIRE and CABLE

are better products . . . cut costs and improve operating efficiency

GARRETT FREIGHT LINES

Pocatello, Idaho

THE CRESCENT COMPANY, INC., PAWTUCKET, RHODE ISLAND



IT'S FRONT PAGE NEWS

All-Silk Suits for Spring at $47.88

Enka Producing Higher-Strength Yarn for Tires

THE entire high-tenacity rayon yarn output of American Enka Corp. is now in an improved type, 10 per cent stronger in various cord constructions than the former high-tenacity yarn, it was made known by Dr. Martin Wadewitz, technical vice-president. The improved yarn is being sold at the same price.

The new yarn is the product of several years of research and development, involving a number of process changes and refinements. Flexing endurance has also been improved, it was stated. All shipments to tire and other high-tenacity yarn customers are now in the improved type.

TO RECEIVE AWARD OF

Walter Rothschild Honored for Community Service

Synthetic Fiber Capacity

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IMPROVED STRENGTH AT NO EXTRA COST IN TIRE CORD BUILT WITH ENKA RAYON YARN

Several years of laboratory and plant work and experimentation on Enka high tenacity rayon yarn have resulted in a number of production changes which, when combined, give very definite improvement to tire cord construction... approximately 10% increased strength.

Two months of actual commercial use substantiate all statements made when this improvement was announced.

This new development is typical of the strides being made by research in improving the potentials of rayon in the world of the future... in bringing you tomorrow's progress today.

ENKA IS A MAJOR PRODUCER OF RAYON FOR TIRES

ENKA RAYON FOR CORD IN TIRES

AMERICAN ENKA CORPORATION, 206 MADISON AVENUE, NEW YORK 16, N. Y.

Introducing . . .

Continued from Page 170

. . . **Cabell Cornish,** appointed executive vice president, and **James O. Toler,** vice president-operations, Best Motor Lines, Dallas, Texas.

. . . **Adrian Curtis,** elected president and general manager, Southern Express, Inc., and Plaza Express Co., Dallas, Texas.

. . . **Don Eaton,** Don Eaton Transfer and Storage Co., Tulsa, Okla., elected president, Associated Motor Carriers of Oklahoma.

. . . **J. R. Cody,** appointed western division superintendent, Campbell 66 Express, Springfield, Mo.

. . . **Benton G. Milster,** appointed safety engineer, Safety Section, Bureau of Motor Carriers, Interstate Commerce Commission, Washington, D. C.

. . . **W. T. Gowens,** Pilot Freight Carriers, Inc., personnel and safety director, as chairman, commercial vehicle section, National Safety Council.

. . . **Perry L. Bode,** as president, Iowa Motor Truck Assn., Des Moines, Iowa.

. . . **Robert Root,** promoted to executive vice president, and **Harold E. Baker,** promoted to vice president and operations manager, Ruan Transport Corp., Des Moines, Iowa.

. . . **Charles J. Sanders, Sr.,** as Tenn. PAR Committee chairman, Nashville, Tenn.

. . . **F. Leslie Watson,** as executive vice president and general manager, Laskas Motor Lines, Inc., Waterbury, Conn.

. . . **William E. Paterson,** head of Paterson and Son Trucking Co., as president, Trucking Federation of the Niagara Frontier, Inc., Buffalo, N. Y.

. . . **William R. Hummel,** promoted to chief engineer, Trailmobile, Inc., Cincinnati, Ohio.

. . . **Alex K. Scherer,** Scherer Freight Lines, Inc., president, as vice president, Illinois State Chamber of Commerce.

. . . **W. H. Boutell,** F. J. Boutell Driveaway Co., as chairman, Automobile Transporters Conference, American Trucking Assns., Inc., Washington, D. C.

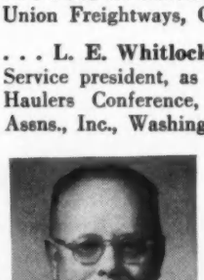
. . . **Joe O. Mattson,** as president, Automotive Safety Foundation, New York City.

. . . **Francis H. Davis,** promoted to vice president in charge of sales, Ross Gear and Tool Co., Lafayette, Ind.

. . . **Gerald W. Ryske,** as vice president in charge of operations, Michigan Express, Inc., Grand Rapids, Mich.

. . . **Paul R. Stevens,** as safety director, Union Freightways, Omaha, Nebr.

. . . **L. E. Whitlock,** Whitlock Trucking Service president, as chairman, Oil Fields Haulers Conference, American Trucking Assns., Inc., Washington, D. C.



. . . **Edgar H. Francois,** promoted to replacement products sales manager, AC Spark Plug Division of General Motors Corp., Flint, Mich.

. . . **Dwight A. Deuel,** as mid-continent manager, refrigerated division, Ringsby Truck Lines, Inc., Denver, Col.

. . . **William F. Duffy,** as managing director, Allied Transportation Industries Assn., Inc., Syracuse, N. Y.

use only
FACTORY NEW
GENUINE
BENDIX DRIVES
and
PARTS!

You can be proud of every repair job when you use only genuine parts. When it comes to servicing Bendix* Drives, be sure to use only *factory new* Bendix Drives and Parts. This means your customers will get the same dependable performance built into every original Bendix Drive—performance proven by over 85,000,000 installations. Insist on *factory new* Bendix Drives and Parts when you order from your distributor.

*REG. U.S. PAT. OFF

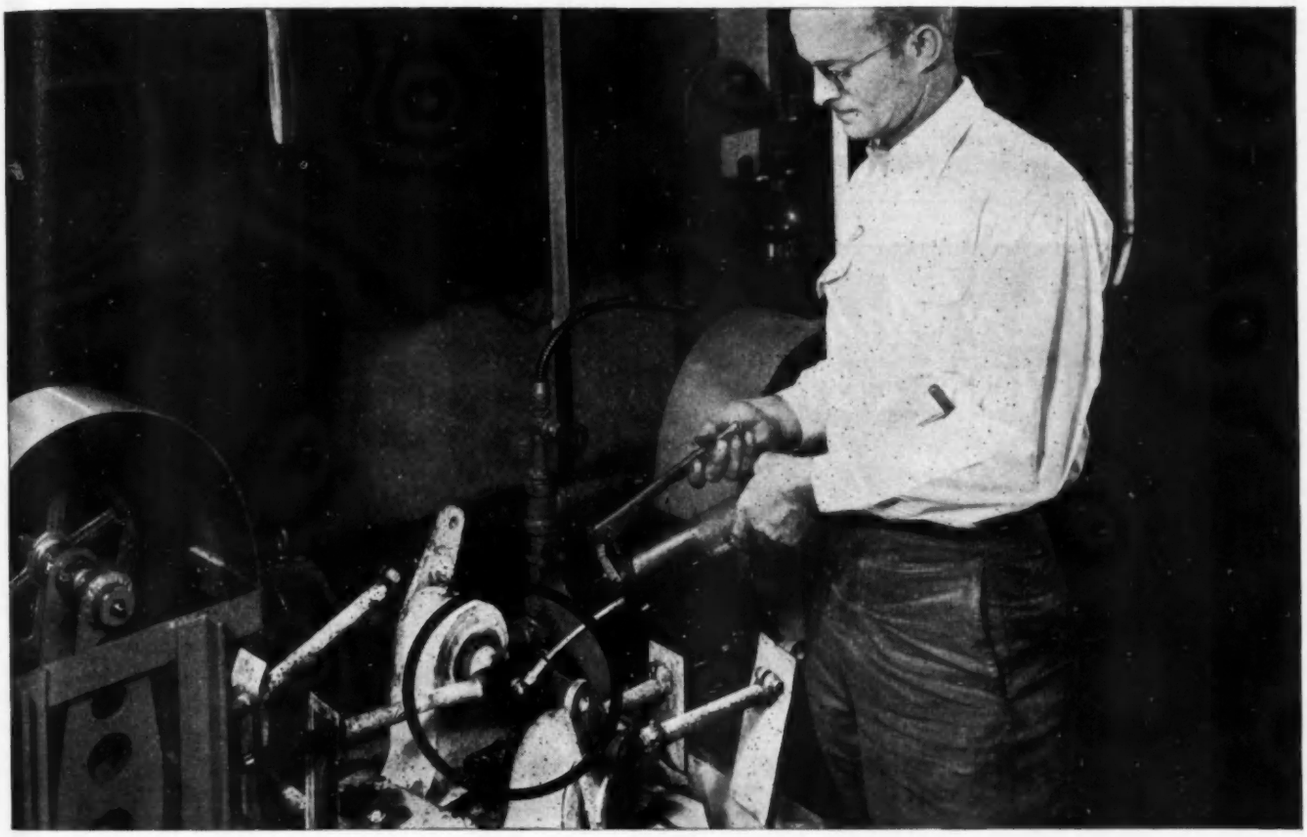
Bendix Drive

ECLIPSE MACHINE DIVISION of
ELMIRA, NEW YORK
Export Sales: Bendix International Division, 72 Fifth Ave., New York 11, New York

Bendix AVIATION CORPORATION

You can count on

Thompson's Performance-Tested steering linkage



THIS "CAR" TRAVELS 1500 MILES A DAY!

IT'S not a *whole* car, of course. Just the important center link of a Thompson precision-made steering linkage. In the above picture, the center link is getting its daily... yes, *daily*...1500-mile lubrication!

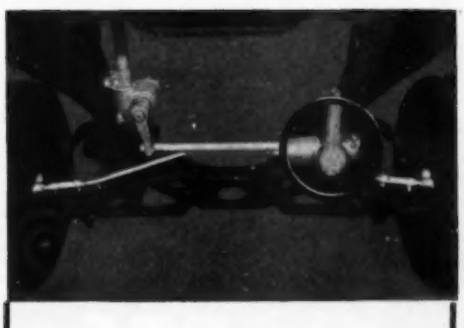
AROUND THE CLOCK—This is part of a grueling Performance Test that goes on in Thompson's Testing Laboratory 24 hours a day. Here the most extreme, difficult road conditions are duplicated. The Thompson steering link is subjected, hour after hour, day after day, to baths in mud and water . . . dry spells . . . jarring jolts of 300 pounds or more . . . and grinding, burning friction.

And, in addition, these rugged tests are supplemented by actual trial runs out on the road in standard-make cars.

WHY THESE TESTS? Because Thompson is continually striving for *improvement* . . . in materials, in performance, in manufacturing procedures. New materials, new processes, new designs are all subjected to these thorough Performance Tests . . . and always under the most extreme conditions.

THE RESULTS? These exacting tests in the laboratory and out on the open road . . . plus periodic skilled analyses by experienced Thompson engineers . . . result in the finest possible steering linkage for America's cars, trucks, buses and tractors.

If you have a steering linkage problem, let Thompson's steering engineers help you. Just write or phone Thompson Products, Inc., Michigan Plant, 7881 Conant Ave., Detroit 11, Mich., WA 1-5010.



You can count on

Thompson Products

MICHIGAN PLANT

Detroit • Fruitport • Portland

February Roundup

Continued from Page 62

if federal legislation can remedy the situation. In presenting his resolution, he said he wanted to have a look at possible *uniform federal licensing of trucks.*

Other States Retaliate

As warned of earlier, the mandatory provisions of Kentucky's reciprocity law were levied on Ohio truck operators. They will be required to pay annual fees to Kentucky ranging from $22 for trucks of 5000 lb or less up to $300 per vehicle for maximum weight. Georgia's legislature passed a law, effective Jan. 1, 1954, providing for an annual $10 permit applying on each truck registered in states that do not have truck reciprocity with Georgia and a $10 round-trip fee applying on each trip made by trucks into Georgia from states imposing *any form of third structure tax* on Georgia trucks.

1953 Domestic Truck Factory Sales by G.V.W.*

	5,000 lb. and less	5,001–10,000	10,001–14,000	14,001–16,000	16,001–19,500	19,501–26,000	Over 26,000	Total
January	47,234	19,101	3,669	12,622	3,344	8,271	3,638	97,879
February	40,616	16,800	3,087	11,068	3,409	7,261	3,611	86,212
March	55,910	22,798	5,588	19,354	4,776	9,067	4,550	122,043
April	51,743	23,352	5,078	17,700	4,287	8,200	4,427	114,787
May	39,635	14,428	2,729	10,788	3,982	7,481	3,390	82,433
June	31,516	10,148	1,575	7,700	3,567	7,687	3,870	66,063
July	45,857	16,564	3,437	12,956	3,442	7,051	3,481	92,788
August	43,833	16,489	3,397	12,385	3,370	8,356	4,081	89,911
September	45,175	15,958	3,096	11,207	3,974	4,625	3,884	88,919
October	40,679	15,218	2,702	10,097	2,882	4,008	3,980	79,566
November	37,447	11,309	2,544	9,552	1,916	4,574	3,439	64,781
11 Months 1953	473,645	181,965	36,902	135,429	37,949	74,941	42,551	983,382
11 Months 1952	401,611	186,747	43,772	155,050	31,186	89,303	39,410	947,079

* Automobile Manufacturers Association.

And Others Cancel

Louisiana and Alabama have added their names to the list of states who have cancelled reciprocity with Ohio, bringing the total to 11. Florida, Mississippi, North Carolina, South Carolina and Tennessee are expected to add their cancellations unless the situation is straightened out by the first of next month.

National Concern

Truck-Trailer Manufacturers Assn., at its annual meeting last month in Boca Raton, Fla., noting the breakdown of reciprocity, passed a resolution calling on all governors to work for repeal of all third structure taxes and to exert every effort to restore reciprocal relations.

The Private Truck Council of America alerted its members to the emergency early last month, discussed it at its annual meeting Jan. 28-29.

Said American Trucking Association's Managing Director John V. Lawrence, in his 1954 legislative outlook, "On the state level, probably the major problem facing truck operators is the possible breakdown of reciprocity."

Said the Transportation and Communication Dept. of the U. S. Chamber of Commerce in its 1954 forecast, "The outlook (for trucks) is generally good, but there is a continuing fear that reciprocity agreements will break down . . ."

Affects Highway Building

Ohio's $500 million highway program was also endangered by the reci-

(TURN TO PAGE 176, PLEASE)

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L·O·F Super·Fine is supplied in rolls up to 200′ long, widths up to 72″. Soft-textured blankets are easily cut and applied for speedy installation. And weight for weight it costs no more than other types of insulation.

Truck payload increased 10% with L·O·F Super·Fine

Space- and weight-saving factors of L·O·F Super·Fine boosted the cubic capacity of an ice-cream delivery truck by 10%.

Since Super·Fine is superior in its resistance to heat flow, less thickness is required to do the same insulating job than with many other materials. Thinner wall construction lets you add profitable payload, yet protect perishable cargoes.

These fine glass fibers will not burn, absorb moisture, mildew or rot. Only inorganic fibers, of which Super·Fine is composed, have *all* these qualities.

Libbey·Owens·Ford's long experience in the glass industry assures you of top-quality Super·Fine.

Super·Fine is lightweight, easily installed. Properly applied, it will not shake down or pack under ordinary vibration.

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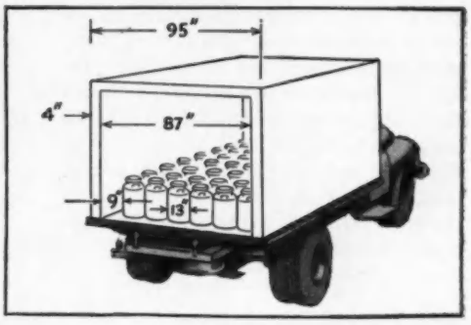
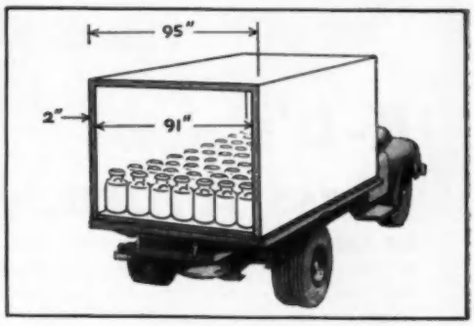
Another success story with L·O·F Super·Fine



BEFORE

The peak load of a Chicago delivery truck was 54 10-gallon milk cans. The cargo space was 87″ wide—enough space for six rows of cans, leaving 9″ wasted space between cans and outer wall.



AFTER

By installing Super·Fine, the same insulating efficiency was maintained but wall thickness was decreased 2″. This space-saving provided room for an additional row, or nine 10-gallon cans—boosting payload by 90 gallons of milk.

FREE! Helpful folder describes further success stories! Tells how you can cash in on extra payload in your trucks and trailers with L·O·F Super·Fine. Write: Libbey·Owens·Ford, Fiber·Glass Division, 3424 Wayne Bldg. Toledo 3, Ohio.

February Roundup

Continued from Page 174

procity cancellations resulting from the state's axle-mile tax. The County Commissioners Assn. of Ohio and the County Engineers Assn. of Ohio asked that legislative consideration of the proposal be halted until the reciprocity situation was corrected. The resolution, adopted at a joint convention of the two groups, expressed fear that trucks would seek registration in other states thus curtailing county funds derived from licenses and gasoline taxes.

While Out in Idaho

Ohio's reciprocity was not the only spot affected by third structure taxes as evidenced by the following report. This is Idaho's reciprocity situation with adjacent states:

Oregon—will waive registration fees but not the transportation-mileage tax.

Washington—will waive registration fees on vehicles under 24,000 lb GVW; others may operate for 30 days by paying 1/12 of Washington capacity fee provided that no vehicle will pay in excess of Idaho use plate fee for a full year's operation in Washington.

Wyoming — will waive registration fees but not compensatory tax.

Montana—will waive registration fees and GVW tax on all vehicles except private vehicles over 24,000 lb GVW (required to purchase trip permits) and all commercial vehicles (required to pay Montana Railroad Commission Tax).

Utah—will waive registration fees on vehicles under 18,000 lb GVW; heavier vehicles may either purchase trip permits or pay full registration fees. Interstate fleets may pay on a mileage basis if approved.

Nevada—will allow free flow of vehicles not engaged in gainful employment. Interstate fleets of five or more vehicles will be apportioned and licensed as determined by Nevada Public Service Commission. Other vehicles may operate on license fee trip permits on payment of 5 per cent of annual license fee.

California—under consideration last month to determine whether Idaho's use plate fee is an added registration fee or a use tax. Says the report, should it be ruled that it is merely an additional registration fee, reciprocity for vehicles over 24,000 lb GVW "may be impossible."

Other States

In a recent bulletin to members the Private Truck Council of America noted that because the reciprocity situation is growing steadily worse in the 11 western states, the California Highway Users Conference has decided to reactivate its Conference Reciprocity Committee.

Pennsylvania and Virginia have settled differences over their respective gross receipts taxes. Each state will grant the other full reciprocity on gross receipts taxes.

Wisconsin has announced complete reciprocity agreements with 30 states and limited agreements with six others.

Pacific Automotive Show

Western fleet operators could look forward to the annual Pacific Automotive Show early next month. Scheduled for March 4-7 in the Civic Auditorium, Seattle, Wash., the show will give truckers an opportunity to look at the latest in equipment and parts being shown by over 300 suppliers who have contracted for more than 535 exhibit booths.

Uniform Trans-Canada Weights

J. D. Millar, Ontario Deputy Minister of Highways, has predicted that uni-

(TURN TO PAGE 202, PLEASE)

for greater safety

K-D's new
Class A turn signal switch

KD 720 *One stock switch for all applications* . . . designed to meet demands of your customers for efficient, trouble-free performance. *In-the-line* plug-in flasher and fuse . . . readily accessible for maintenance. Short sturdy housing with *inside welded plate* threaded for bracket bolt insures vibration-free mounting. Positive switch-to-steering-post rigidity. Finger tip control switch handle. When in operation, AAMVA approved green indicator light flashes continuously . . . inoperative when signal bulb burns out. Easily installed. Operates K-D and all competitive turn signals.

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KD 778 Double face Class A Turn Signal with engineered *glass lens* protected and held in place by steel door. *Two silver-plated reflectors* and *two bulbs* give brilliant signals exceeding specifications. Permanent control of beam pattern. Easy fender mounting. Companion to KD 777 single face Turn Signal and KD 779 flush mounting Turn Signal.

KD 768 Slim, trim two face Class A Turn Signal with non-fading Stimsonite Lucite plastic lens. Minimum thickness and weight . . . attractive streamlined appearance. Easy to mount anywhere. Matches KD 767 single face bracket mounting and KD 769 flush mounting Turn Signal.

KD 757 Class B single face Turn Signal with *glass lens* . . . economical for all vehicles not requiring Class A signals. Companion to KD 758 double face and KD 759 flush mounting Turn Signals. Engineered for maintained efficiency.

The Complete Line K-D Turn Signals are another part of K-D's *single-source-service* of automotive Saftee Products.

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THE COMPLETE LINE KD SAFTEE PRODUCTS

"I'm proud to be a Savings Bonds salesman for Uncle Sam . . ."

CHARLES M. WHITE
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Republic Steel Corporation

"I'm proud to be a Savings Bonds salesman for Uncle Sam and I urge every business executive in the nation to advance the cause of American enterprise in this way.

"Every one of us at Republic Steel is proud of the results of our Payroll Savings campaign: 96.7 per cent of our employees saving systematically from each pay in U. S. Savings Bonds. These results were possible only because all 68,344 of us at Republic were part of an enthusiastic team. We feel that this is the best way we can demonstrate our appreciation of the efforts to have a sound dollar and a stable economy."

• 96.7% of Republic Steel's 68,344 employees — over 66,000 men and women — are enrolled in the Payroll Savings Plan.

• These 66,000 members of Republic's "enthusiastic team," as Mr. White so aptly terms them, are investing more than $16,000,000 per year in U. S. Savings Bonds.

• In addition to building personal security, these men and women of Republic are making a very important contribution to America's "efforts to have a sound dollar and a stable economy."

Certainly Republic Steel's Payroll Savings record is outstanding — one of the best in the country. But it is not unique. Other companies have comparable records, measured in percentage of employee participation, or in annual Savings Bond purchases.

In every company with a high percentage Payroll Savings Plan you will find that the president or top executive appreciates the importance of the Plan and what it means to personal and national security. He knows that 45,000 companies have Payroll Savings Plans . . . that 8,000,000 employees of these companies are investing more than $160,000,000 per month in Savings Bonds . . . that the cash value of Savings Bonds held by individuals today is more than 36 billion dollars — and rapidly mounting, thanks largely to the steadily increasing family of Payroll Savers. He is 100% behind his company's Payroll Savings Plan, and everybody in the company knows it. He takes personal pride in watching employee participation grow to 60%, 70%, 80%, or, perhaps, the high 90's.

If you are not making this important contribution to America's effort for a sound dollar and a stable economy, a wire or letter to Savings Bonds Division, U. S. Treasury Department, Washington, D. C., will bring prompt cooperation from your State Director. He will show you how easy it is to join Mr. White and thousands of other executives as a Savings Bond Salesman for Uncle Sam, with a company Payroll Savings Plan that you can be proud of.

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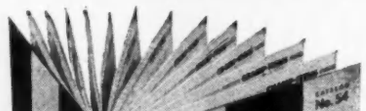

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February Roundup

Continued from Page 176

form vehicle weights will apply over the whole length of the presently abuilding Trans-Canada highway. It would come about, he said, through mutual agreement of the provinces concerned.

More Piggy-Back

The Chicago and Northwestern Railroad has inaugurated trailer-on-flatcar service, hauling its own subsidiary truck fleet's vehicles, between Milwaukee, Wis., and Chicago. Other points covered by similar service to and from Chicago include Green Bay, Wis.; St. Paul, Minn., and Council Bluffs and Omaha, Neb.

1953 Truck Trailer Shipments*

	November	Eleven Months
Vans		
Insulated and Refrigerated		
Steel	65	802
Aluminum	222	2,967
Furniture		
Steel / Aluminum	111	1,363
All other closed-top vans		
Steel	980	10,693
Aluminum	689	10,008
Open-top		
Steel	132	1,618
Aluminum	157	1,971
Total—Vans	2,356	29,412
Tanks		
Petroleum	276	3,478
Food / L. P. G. / All other	63	777
Total—Tanks	339	4,255
Pole, Pipe and Logging		
Single Axle	41	556
Tandem Axle	27	942
Total	68	1,498
Platforms		
Racks, livestock and stake	136	4,128
Grain bodies	50	873
Flats, all types	391	8,598
Total—Platform	577	13,599
Low-bed haulers	284	4,983
Dump trailers	85	945
All other trailers	3,551	32,355
Total—Complete Trailers	7,260	87,047
Converter dollies	.....	1,027
Chassis only	194	2,927
Total—Trailers and Chassis	7,454	91,001

* Industry Division, Bureau of the Census.

Idaho Height, Length, Width

Effective Jan. 1, Idaho's new height, length and width limits as set by the State Highway Board of Directors are as follows: width—9 ft, height—14 ft., length—35 ft for single vehicles, 60 ft for tractor and semi-trailer combinations, and 65 ft for truck-trailer and other combinations.

Motor Carrier Radio Service

The Federal Communications Commission has set Feb. 5 as the deadline

(TURN TO PAGE 205, PLEASE)

Diesel SHOP EQUIPMENT

Other Diesel Shop Equipment:
Nozzle and Injector Cleaning Kits • Lapping Blocks and Sets • GM 71 Engine Service Tools • GMC Coach and Truck Tools • Fuel Pump Calibrating Stands

WRITE TODAY for our complete Shop Equipment Manual showing these and more than 300 other testers and tools engineered specifically for Diesel maintenance and repair.

Bacharach Industrial Instrument Co.
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February Roundup

Continued from Page 202

for filing briefs for or against the newly proposed Motor Carrier Radio Service. Under the plan common and contract motor carriers of property would receive (1) unrestricted area operations for all mobile purposes, including over-the-road and pick-up and delivery operations; (2) 12 frequencies for their exclusive use in the 43-44 megacycle band, and (3) eight shared frequencies in the 452-457 Mc. band.

Sharing the 452-457 Mc. frequencies is expected to work little hardship on motor carriers operating in that area of the spectrum. Users with whom the frequencies will be shared are "common or contract carriers of passengers by street car, bus or rail." The 12 frequencies it provides in the highly desirable 43-44 Mc. bands for the exclusive use of for-hire truck operators will replace seven now available to motor carriers in the 35 Mc. band known as Highway Truck Radio Service.

The pending FCC order provides for radio use by private motor carriers through a new Special Industrial Radio Service. Under the FCC proposal, six of the seven frequencies now used in the Highway Truck Radio Service would be reassigned to the Special Industrial Radio Service.

Piggy-Back Committee

A trucking industry committee has been named to make a study of rail-trailer "piggy-back" operations by Jack Cole, president, American Trucking Assns. Chester G. Moore, ATA Secretary, was chairman. Others on the committee are: Cecil Vernon, Mid-States Freight Lines president; D. L. Sutherland, Middle Atlantic Transportation Co. president; Peter D. Serra, Rand Express Freight Lines president; L. S. Carroll, Red Circle Freight Lines president; Forrest E. Wolverton, Eastern Automobile Forwarding Co. president; Philip Hemingway, Hemingway Brothers Interstate Trucking Co. president; Lee R. Sollenbarger, Denver-Chicago Trucking Co. vice-president; J. K. McLean, McLean Trucking Co. executive vice president; George Briggs, Briggs Transfer Co. president; and J. A. Roberts, P. B. Mutries Motor Transportation Co.

NATA Scholarships

National Automobile Transporters Assn., working in cooperation with the National Committee on Education of American Trucking Assns., has contributed funds to provide six $500 transportation scholarships at the University of Tennessee for students in the field of transportation and motor transportation. The $3000 fund will be known as the Scholarship Program of the National Automobile Transporters Assn. NATA voted to name one of the awards the "Walter F. Carey Scholarship," in honor of the past chairman of the NATA board and present board chairman of ATA. Contributors to the fund are: Automobile Carriers, Inc., Flint, Mich.; Bolin Driveaway Co., Cleveland, Ohio; F. J. Boutell Driveaway Co., Flint; Fleet Carrier Corp., New York City; and M. & G. Convoy Co., Buffalo, N. Y.

Senate Committee

Three new senators have been added to the Senate Interstate Commerce Committee — all Republicans. The new members are Senators James H. Duff (Pa.), William A. Purtell (Conn.), and Frederick G. Payne (Me.). No changes are contemplated in the House Committee on Interstate and Foreign Commerce.

ICC Streamlining

The following items have been noted in streamlining the activities of the Interstate Commerce Commission in line with the recommendations of the Wolf Management Report:

1. Consolidation of the Bureau of Accounts and Cost Finding and the Bureau of Valuation into a Bureau of Accounts, Cost Finding and Valuation headed by Cecil W. Emken.

2. The recent establishment of the Motor Carrier Board to handle actions on certain certificates, permits, licenses, dual operations, transfers and temporary authorities with similar benefits in time saving in view.

3. A revised procedure of making service of orders on the basis of special lists of parties who are interested in the adjustment, or upon publishing agents, rather than serving all parties to tariffs.

4. Some streamlining of procedures for developing current rail costs for use in suspension cases, and for regional motor carrier costs.

5. An increase in the use of modified procedure in formal cases has saved time and expense of examiners and counsel for the litigants.

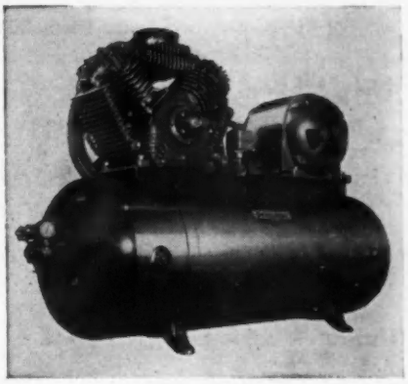
6. Special rules of practice providing pre-hearing exchange of exhibits and prepared statements have conserved hearing time.

7. A greater use of field attorneys to handle court actions.

8. Delegations to the Board of Suspension and the Fourth Section Board have reduced the workload on the commissioners and their staff.

(TURN TO PAGE 206, PLEASE)

Low cost air



How much does your compressed air cost?

Probably more than you think. The biggest cost in compressed air isn't the price of the compressor; it's the operating cost: the power needed to produce each cubic foot of air, the amount of service and repairs needed. That's why it will pay you to replace your old or inefficient compressor with a DeVilbiss Air Compressor. You'll save on power, upkeep and depreciation. *DeVilbiss Air Compressors deliver more air for the money.*

For a complete analysis of your compressed air needs, contact your local DeVilbiss jobber.

DeVilbiss has an Air Compressor to fit your needs, from ½ to 15 hp., single or two stage, Upright or V Type.

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February Roundup

Continued from Page 205

Fifty Million Vehicles

More than 50 million motor vehicles were in operation as of July 1, 1953. Figures reveal that 42,202,349 passenger cars and 8,692,574 trucks were registered as of July 1 for a total of 50,894,923 as compared to 48,189,796 vehicles registered as of July 1, 1952.

Italian Trucking

The Italian News Agency, Agit, notes the growing importance of road transportation in the general economic life of Italy in announcing a "Center of Legislative Studies on Road Transportation" about to be set up in Rome. In addition to government representatives, members of university faculties and delegates from road transport organizations will be included.

New Georgia Laws

New laws recently enacted in Georgia, in addition to the earlier mentioned reciprocity retaliatory law, include: H 321 — prescribing fees for Class B certificate trailers for transportation of household, office and store furniture and fixtures; H 128—(1) providing that vehicles constructed so that the center top of the steering post is more than 24 in. from the left side of the body, cab or load, or more than 14 ft from rear of body or load be equipped with turn signals; (2) requiring all new vehicles and trailers made after Jan. 1, 1954, be equipped with turn signals; and (3) requiring all vehicles sold after Jan. 1, 1954, be equipped with at least one stop light.

Safety Awards

Fleets awarding their outstanding, safe drivers recently include:

Dealers Transport Co., Kansas City, Mo.—to a group of drivers whose accident-free record represents 177 years and almost 16 million miles.

Holland Motor Express, Holland, Mich.—to nine Kalamazoo and Benton Harbor, Mich., terminal drivers. Awards were made at a country-style chicken dinner.

McLain Trucking, Inc., Muncie, Ind. —to 14 drivers. It was estimated the group had driven 1½ million miles in the past year wtihout an accident.

Suburban Motor Freight, Inc., Columbus, Ohio—to 64 drivers. Awards were made at a company sponsored breakfast attended by the "vice presidents in charge of safety"—the drivers' wives.

Truckaway Corp., Pontiac Mich.—to 126 drivers. Four of the drivers have accident-free records of 12 years or more.

Floyd and Beasley Transfer Co., Sycamore, N. Y.—to 18 drivers. Together, they represent about 3 million miles of safe driving.

Mound City Forwarding, Inc., St. Louis, Mo.—to 32 drivers from the company's St. Louis and Springfield, Ill., operations. Four have 10 years or more of accident-free truck driving.

(TURN TO PAGE 208, PLEASE)

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the name to remember for...

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- HYDRAULIC END-LOADERS
- DUMP BODIES FOR ALL PURPOSES

The GALION Allsteel Body Company

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Ideal for loading docks, trucks, or any doorway. They travel straight up and down; coil out of the way; make all floor and wall space around doors fully usable all of the time; give all-metal protection against fire, wind, theft. Built in any size. Motor or manual operation. Write.

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For Low-Cost, Speedy, Thorough Grease-Chasing!

On Engines and Chassis...

On Very Dirty Truck and Bus Bodies...

On Stubborn Oily, Greasy Concrete Floors...

On Engine Parts...

Get rid of oily, greasy dirt *anywhere* in your shop — quickly, safely and economically.

Spray on the Magnusol mix — one part Magnusol concentrate to eight parts kerosene or safety solvent. Let soak. Then pressure-rinse with water.

Harmless to skin and metals. Non-toxic. Non-flammable. *Thorough* cleaning action.

Write for the Magnusol Bulletin to see how you can save time and labor on these grease-chasing jobs in your shop.

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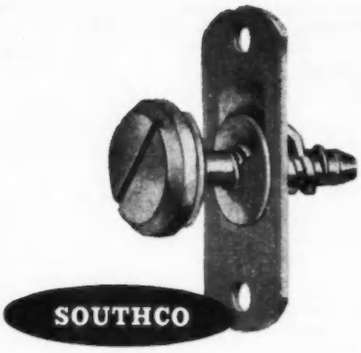
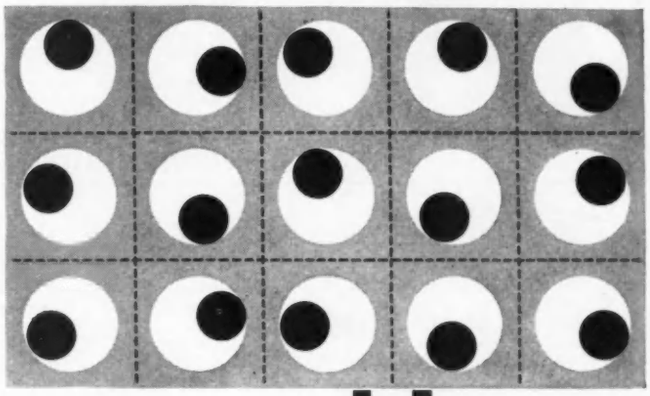


a quick release fastener that...

solves alignment problems

Illustration indicates infinite variety of positions assumed by screw fastener to compensate for misalignment.



"FLOATING SCREW" ASSEMBLY COMPENSATES FOR OUT-OF-LINE DOORS AND PANELS

Installation of access doors and panels is made easy and production is speeded with Southco Quick-Release Fasteners. The wide alignment tolerances of Southco's "Floating Screw" adjust automatically to misalignment, saving mechanics' time. Also, the Southco "Floating Screw" insures accurate and uniform closure throughout the life of the equipment, compensating for warpage and bends resulting from hard usage.

One Southco grip length can meet most panel thicknesses on the average assembly—no need to specify many fastener sizes!

For complete information, write Southco Division, South Chester Corporation, 1419 Finance Building, Philadelphia 2, Pa.

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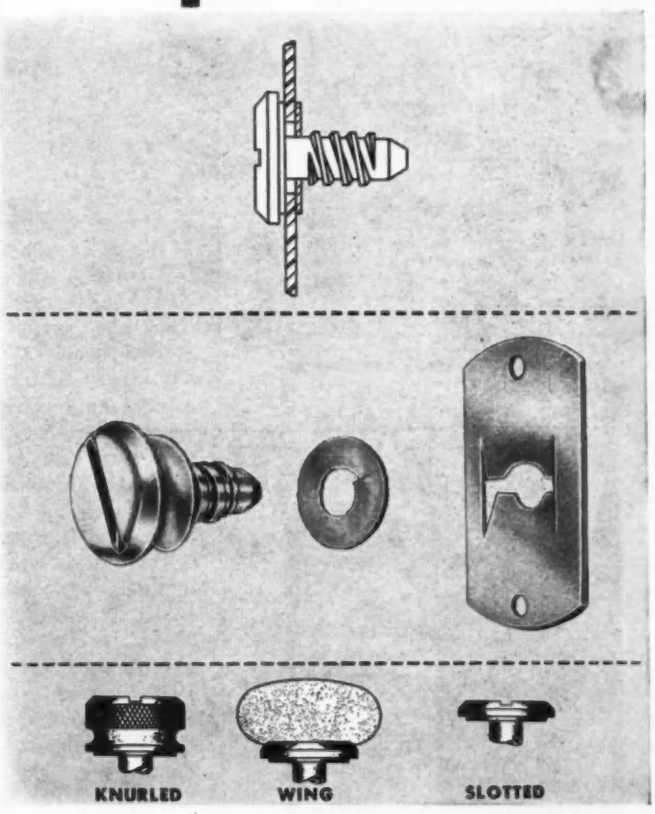

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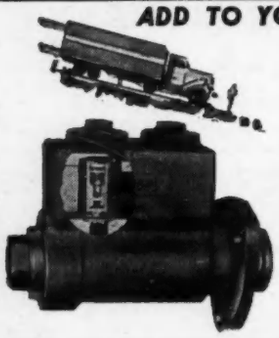
ADD TO YOUR TRUCK SAFETY—CUT YOUR POWER BRAKE COSTS IN HALF!



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HOLD! Flip the switch—step on the brake pedal and you have more dependable *holding* power than ever before attained with any emergency brake. The MICO Brake Lock is simple to install in any hydraulic braking system.

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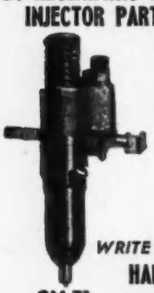
ZOLLNER MACHINE WORKS FORT WAYNE IND

BY RECLAIMING YOUR DIESEL INJECTORS AND INJECTOR PARTS YOU CAN SAVE 100%



*Complete GM 71 Diesel Injectors—11.90**
*Caterpillar Pumps—16.00**
*Caterpillar Nozzles—10.70**
Reclaimed Plungers & Bushings for
*GM 71— 5.50**
*GM 567—10.55**
* Prices based on exchange.

WRITE FOR FURTHER INFORMATION
HANCOCK DIESEL SERVICE CO.
300 WALNUT STREET, FINDLAY, OHIO
GM 71

Time Savers...
KEN TIRE CHANGING TOOLS
...they're *"Job Designed"*

KEN-TOOLS are hand forged from chrome nickel alloy steel...heat treated for extra long life...*Best By Actual Test!*

KEN-TOOL...
LARGEST EXCLUSIVE MAKERS OF TIRE AND WHEEL CHANGING TOOLS

See Your Local Jobber for Our Complete Line
The KEN-TOOL Mfg. Co.
Akron 5, Ohio

February Roundup

Continued from Page 206

City Express, Inc., Baltimore, Md.—to 41 drivers. Seven of the drivers received special awards including bonds, rings and watches.

Pilot Freight Carriers, Inc., Winston-Salem, N. C.—to 78 drivers. In 1953, 36 per cent of the company's drivers were awarded for a year or more of safe driving.

American Thread Co., Bristol, Tenn.—to 34 out of 42 drivers. One of them has an 18-year no-accident record.

Smith's Transfer Corp., Staunton, Va.—to 110 drivers. Awards were made at a dinner climaxing a week-long company management and sales conference.

Hillside Transit Co., Milwaukee, Wis. to 82 drivers. Top driver had a 21-year record, and the total safe driving record of the group was 416 years.

Inland-Unitah Freight Lines, Inc., Salt Lake City, Utah—to 25 drivers. They also shared in a company-wide $30,000 bonus.

Commercial Carriers, Inc., Detroit—to 100 auto transport drivers. Their record represents delivery of over 65,000 new cars to dealers without a chargeable highway accident.

Automobile Carriers, Inc., Flint, Mich.—to 82 drivers. Their safety record equals 479 years and over 41 million miles of accident-free truck driving.

Hennis Freight Lines, Winston-Salem, N. C.—to a group of drivers at a barbecued chicken dinner. During 1953, 53 per cent of the company's drivers were without an accident. Top award to winning driver was a 1954 Pontiac car.

Central Motor Lines, Inc., Greensboro, N. C.—to 82 drivers. One driver awarded at the luncheon had a 14-year record.

Dixie Highway Express, Inc., and L. L. Majure Transport Co., Meridan, Miss.—to 100 drivers. The group, representing 296 years of accident-free driving, split a $5000 bonus among them.

END

Please Resume Reading Page 64

HEAVY DUTY
MOTOR TRUCKS
GASOLINE ELECTRIC
GENERATING SETS
DUPLEX
TRUCK COMPANY
LANSING, MICHIGAN

You'll find a part for almost every repair job requirement in the Wohlert line. They are good, long lasting parts, too.

Wohlert Corporation
LANSING 5 MICHIGAN

Send

FOR THIS BOOKLET
• Here's the what, how and why of TRU-STOP—the safer, more economical Emergency Brake.
Write for DH-33

ACCO 801 Stephenson Bldg., Detroit 2, Mich.
AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE
In Business for Your Safety

FRINK SNO-PLOWS
REG. U.S. PAT. OFF.
Both "V" TYPE and ONE WAY BLADE TYPE
hand or power hydraulic control
FOR ALL MOTOR TRUCKS FROM 1½ to 10 TONS

FRINK SNO-PLOWS, INC., CLAYTON, 1000 Isl., N.Y.
DAVENPORT-BESLER CORP., DAVENPORT, IOWA
FRINK SNO-PLOWS OF CAN. Ltd., TORONTO, ONT.

TWO OPERATING COSTS

YOU CAN BRING DOWN maintenance costs and cut your fuel consumption—gasoline or Diesel—by lubricating engines with heavy duty *Texaco D-303 Motor Oil.* This fully detergent and dispersive oil keeps engines free from harmful sludge, gum and carbon deposits, keeps rings free in their grooves.

Texaco D-303 Motor Oil thus assures proper compression and combustion. Engines deliver full power with less fuel. Parts last longer and time between overhauls can be safely extended. Your maintenance costs come down.

For further economy, lubricate chassis with *Texaco Marfak* and wheel bearings with *Texaco Marfak Heavy Duty.* These remarkable lubricants seal dirt and moisture out of bearings, seal themselves in. You get extra hundreds and thousands of miles of protection against wear and rust. Parts last longer, maintenance costs less.

In transmissions and differentials, use *Texaco Universal Gear Lubricant EP.* It stretches gear life, assures smoother operation.

Let a Texaco Lubrication Engineer show you specifically how effective lubrication can save you money. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write:

The Texas Company, 135 E. 42nd St., New York 17, N. Y.

Lubricants and Fuels
FOR THE TRUCKING INDUSTRY

JET ENGINES and TRUCK and COACH ENGINES

ACs with Patented *CORALOX* Insulator are Built for Both!

The *CORALOX* Insulator of the AC starter-plug used in jet planes must withstand terrific temperatures. This fact is important to you because the insulator of the AC Spark Plugs used to fire truck and coach engines is of the same composition as in the jet plugs.

It is important to keep every truck or coach engine in your fleet operating at full power and at lowest cost. Many fleet operators standardize on AC Spark Plugs because patented *CORALOX* keeps plugs cleaner longer. *CORALOX* is remarkably strong, enables AC to use longer, thinner insulator tips that heat up rapidly to burn away the oxide and carbon coatings that foul up other types of insulator material.

AC SPARK PLUGS

FACTORY EQUIPMENT ON MORE NEW COMMERCIAL VEHICLES THAN ANY OTHER BRAND

AC SPARK PLUG DIVISION GM GENERAL MOTORS CORPORATION

"We check all our spark plugs at regular intervals on the Champion testing unit!"

TRUCK MIXED CONCRETE

Cooper SUPPLY CO.

LOADING STATIONS
6480 EAST EIGHT MILE ROAD
JOY ROAD AND FREELAND
VAN DYKE AND SIXTEEN MILE

6480 EAST EIGHT MILE ROAD, DETROIT 34
TWINBROOK 1-4040

Champion Spark Plug Co.
Toledo 1, Ohio

December 29, 1953

Gentlemen:

Spark plugs are a mighty important item in our business. We operate 78 concrete mixer trucks—two engines each, ten trailer-trains, twelve heavy-duty tractor units, a total of about a dozen pickups, dump trucks and light tractor units plus assorted cranes and bulldozers. The fleet will log over 2,750,000 miles a year and, of course, there are many thousands of hours of operating time on the industrial engines. So, you may be interested in what our Fleet Superintendent, Mr. W. N. Lyons, has to say about the performance of the Champions used in this equipment.

"We have a rigidly enforced preventative maintenance schedule that includes checking our spark plugs on the Champion F600 testing unit at regular intervals. In the 17 years I've worked for Cooper we've never found any spark plugs that could give us the performance, long life and selection of heat ranges that Champion Spark Plugs offer. We try all makes of plugs but Champions always come out the winner."

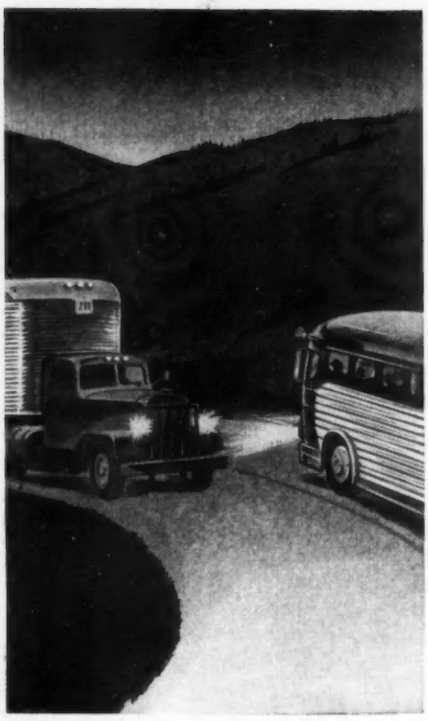
I congratulate you on building spark plugs that deliver such dependable service.

Sincerely,
COOPER SUPPLY COMPANY

Gage W. Cooper
President

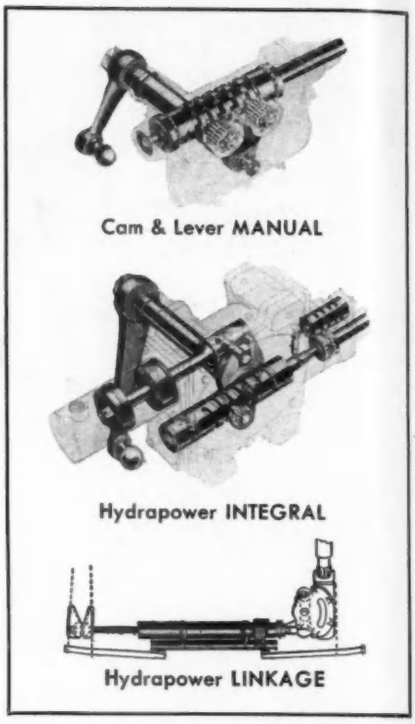
GWC:CC

On the Road...and...Everywhere Else



Steer Easy with ROSS

Takes THE Work OUT OF Steering



A Gear for Every Need

Ross STEERING

▶ **Exclusive steering specialists** since 1906, Ross provides a gear for every steering need—manual or power.

▶ **Ross Cam & Lever** manual steering has long been noted for maximum *ease* and *stability* in just the *right* combination . . . sturdy, rugged construction . . . minimum wear . . . simplicity and speed in any needed adjustment.

▶ **Active in power** steering since 1942, Ross is currently producing—for a wide variety of vehicles—both integral and linkage types that are among the *simplest*, *surest*, most *economical* power units yet developed.

▶ **We invite** discussion of *any* steering problem.

ROSS GEAR AND TOOL COMPANY · LAFAYETTE, INDIANA

CAM & LEVER MANUAL...HYDRAPOWER INTEGRAL...HYDRAPOWER LINKAGE

Design that has never stood still

(Another reason why Timken® bearings are first choice with truck manufacturers)

EVER since we pioneered the tapered roller bearing back in 1899, we've never let ourselves become complacent about our designs.

The Timken® bearing of today is a thousand miles ahead of the first one—only because we've never stopped looking for ways to take another step ahead. Look at the picture: these are just a few of the stages on this long, progressive journey.

Among the Timken Company's many design "firsts" is the one-piece perforated cage that assures exact spacing of rollers.

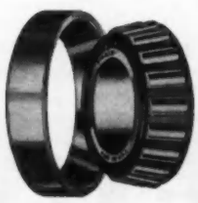
Only Timken bearings give you 1) advanced design, 2) precision manufacture, 3) rigid quality control and 4) special analysis Timken steels. Be sure your replacement bearings carry the trade-mark "Timken". Send now, on your company letterhead, for free booklet: "Timken Tapered Roller Bearings, Their Care and Maintenance". Dept. JCC-2, The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

SINCE THEY'RE BEST WHEN THE TRUCK IS NEW, THEY'RE BEST FOR REPLACEMENT, TOO!

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS



NOT JUST A BALL ○ NOT JUST A ROLLER ⬭ THE TIMKEN TAPERED ROLLER ⬭ BEARING TAKES RADIAL ⓪ AND THRUST →⓪← LOADS OR ANY COMBINATION →✳←

Remember "HIGH-FLYING" HARRY?

Always in a hurry
Always drove too fast
Put off getting brakes relined...
Figured they would last.
Tried to stop his truck one day
Coming down a grade
Headlines told the story
Of the awful price he paid.

You can depend upon WAGNER QUALITY because Wagner Products are used as orignial equipment by car, bus, truck, and trailer manufacturers.

Est. 1891

Wagner

...the best known name in brake service

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID . . . Hollet . . . Cotlett BRAKE LINING . . . AIR BRAKES . . . TACHOGRAPHS . . . ELECTRIC MOTOR

Safe brakes save lives...reline with

WAGNER BRAKE LINING

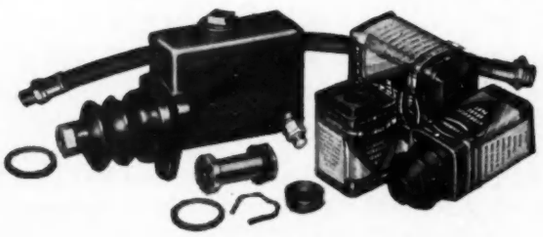
... complete coverage from a single dependable source

Add to the safety of your fast-moving trucks by keeping brakes at top efficiency always. A few feet of stopping power often measures the difference between life and death.

Standardize on Wagner Brake Lining. It's top quality. As a pioneer manufacturer of hydraulic brakes, Wagner knows what qualities are required in brake lining, and those qualities are found in Wagner Brake Lining. It is uniform in density, composition, and frictional qualities throughout entire service thickness.

Wagner Brake Lining easily withstands extremely high operating temperatures. It will not compress, swell, deteriorate with age, or absorb moisture. Available in sets, blocks, rolls, slabs, cut segments, and on shoes, either bonded or riveted. Coverage is complete for every car, truck, or bus.

...and all from ONE source..... your Wagner jobber....



Wagner Lockheed Hydraulic Brake Parts

Cover every make and model of vehicle and include numbers not easily obtainable elsewhere.

Wagner Lockheed Hydraulic Brake Fluid

Chemically balanced to function perfectly under all driving conditions, and in all seasons.

Wagner Electric Corporation

(Branches in Principal Cities in U. S. and in Canada)

GET IT FROM YOUR JOBBER

WAGNER ELECTRIC CORPORATION
6470 Plymouth Avenue., St. Louis 14, Mo., U. S. A.
Please send me copy of Hydraulic Brake Service Bulletin HU-17.1 understand that there is no obligation of any kind.

NAME_____

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ADDRESS_____ ZONE____ STATE_____

CITY_____

FRANCHISED Wagner GENUINE PRODUCTS DEALER

... TRANSFORMERS ... INDUSTRIAL BRAKES

See them now!

New Ford F-800 BIG JOB. New 170-h.p. Cargo *King* V-8. New Power Steering available.*

New FORD TRUCKS for '54

featuring TRIPLE ECONOMY

Big new savings in the 3 most important truck saving areas

1. NEW Gas-Saving, Low-Friction, Overhead-Valve, High-Compression, Deep-Block Engines in all Models!

Now, you get a gas-saving Low-Friction engine in *any* Ford Truck you choose—from 115- to 170-h.p.! New short-stroke design cuts internal friction loss up to 33%, liberates up to 23% more *usable* power.

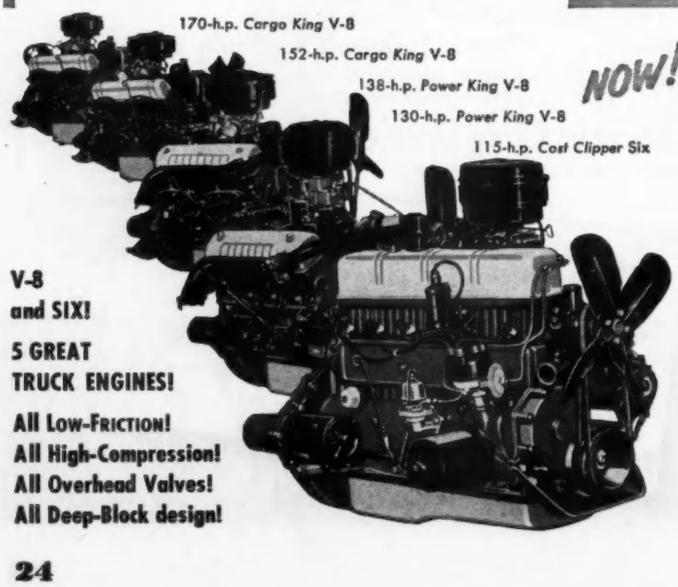
2. NEW Driverized Cabs! NEW Power Steering! NEW Power Brakes! Fully Automatic Fordomatic Drive!

Ford's 3-man Driverized Cabs cut fatigue! New *Master-Guide Power Steering* standard on T-800 Series, optional on most other Big Jobs, Power Braking* for ½-ton, Fordomatic* for all light duty models!

3. NEW Money-Saving Capacities! Over 220 Models! New 6-wheelers! The one right truck for your job!

Ford's expanded new truck lines include brand-new Ford Tandem-Axle Big Jobs, up to 60,000 lbs. G.C.W., and two more giant new Ford Cab Forward Big Jobs rated up to 55,000-lbs. G.C.W.!

*Available at extra cost.



V-8 and SIX!

5 GREAT TRUCK ENGINES!

All Low-Friction!
All High-Compression!
All Overhead Valves!
All Deep-Block design!

NOW! **Mightiest concentration of power per cubic inch ever built into any truck engine line! Only FORD has it!**

For the power they develop, Ford's new truck engines have *less cubic inch displacement* than any other truck engine line. The Ford 317 cu. in. *Cargo King* V-8 develops its 170-h.p. from as much as 96 cubic inches less displacement. Smaller-displacement engines normally need less gas! That's why Ford *concentrated power* is a big factor in new Ford Truck *TRIPLE ECONOMY!*

THE ENGINEER'S REPORT

DATA

LUBRICANT RPM Delo Oils

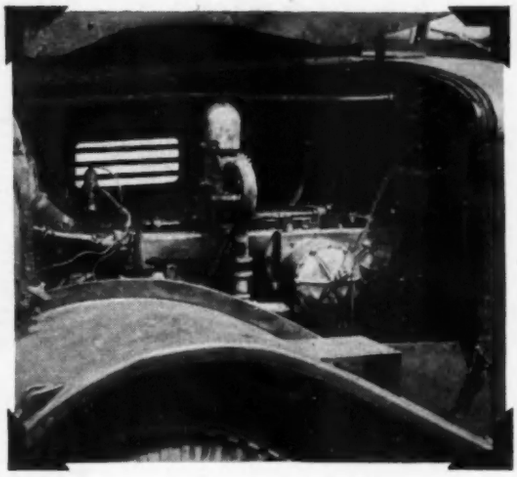
UNIT 325 H.P. L-P engine

SERVICE Highway hauls — heavy loads

MILEAGE 1¼ million

FIRM United Liquid Gas Co., Fresno, Calif.

Only one general overhaul in 1¼ million miles!



USING RPM DELO SPECIAL LUBRICATING OIL, the 325 H.P. engine in this truck is still in good condition after 770,000 road miles and the equivalent of 500,000 extra miles from operating the unit's delivery pump. Overhauled at 520,000 speedometer miles, only pistons, sleeves, bearings and valve guides were replaced. Crankshaft did not need regrinding. United Liquid Gas Co. uses truck to deliver 35,000-pound loads of liquefied petroleum gas. In spite of the great mileage and both on- and off-highway hauls, RPM DELO Special Lubricating Oil kept all engine parts clean. The engine, which burns propane and butane, was free of deposits at every inspection. A spare cylinder head assembly, put in stock when the truck was new, has never been used.

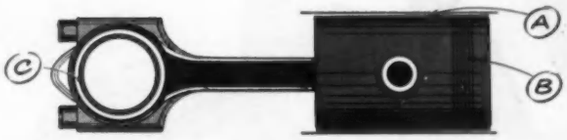
REMARKS: There is an RPM DELO Oil for every type of diesel and heavy-duty gasoline engine. They cut wear and reduce maintenance expense for operators in every industry where such engines are used.

FREE FOLDER on the RPM DELO Oils gives you complete information on how to meet any heavy-duty engine operating condition with one of these oils. Write or ask for it today.

RPM DELO LUBRICATING OILS

TRADEMARK "RPM DELO" REG. U.S. PAT. OFF.

How RPM DELO Oils reduce wear, corrosion, oxidation in all heavy-duty engines



A. Contain special additives that provide metal-adhesion qualities...protect parts whether hot or cold, running or idle.

B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean...helps prevent piston scuffing.

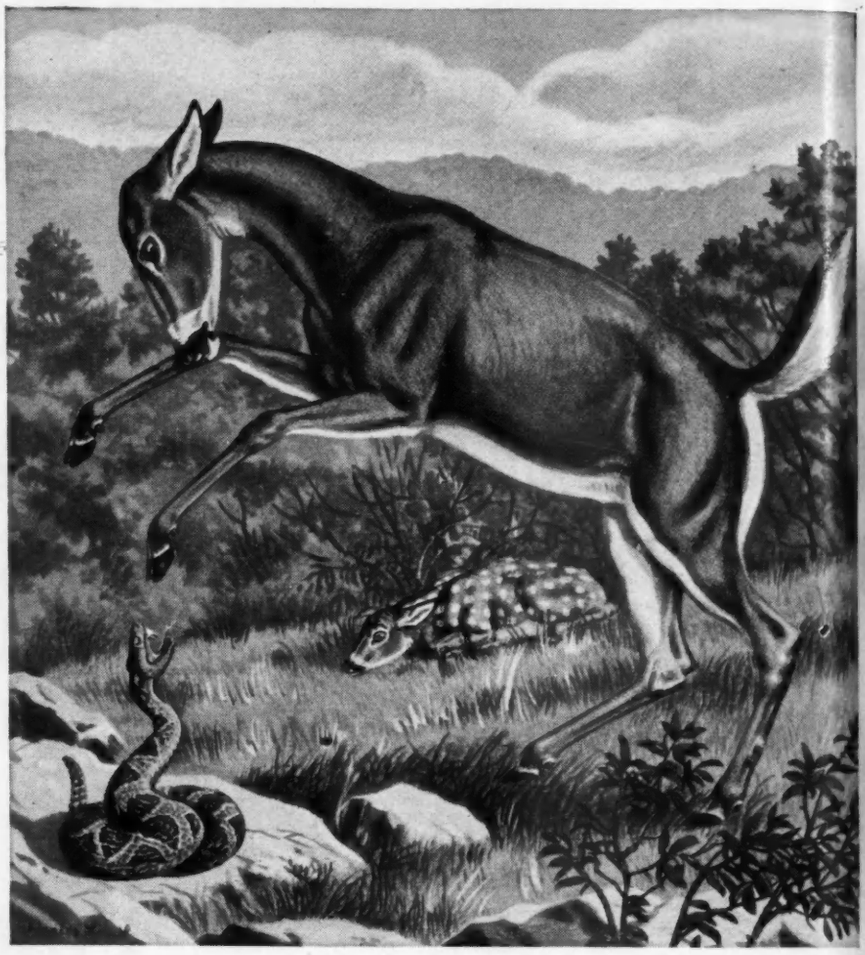
C. Special compounds stop corrosion of any bearing metal and foaming in crankcase.

FOR MORE INFORMATION about this or other petroleum products of any kind, or the name of your nearest distributor handling them, write or call any of the companies listed below.

STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20 • STANDARD OIL COMPANY OF TEXAS, El Paso
THE CALIFORNIA OIL COMPANY, Barber, New Jersey • THE CALIFORNIA COMPANY, Denver 1, Colorado

Animals Protect Themselves

Normally of a very timid nature, a Doe will fight ferociously and effectively to protect its Fawn against attacks of Rattlesnakes and other natural enemies.



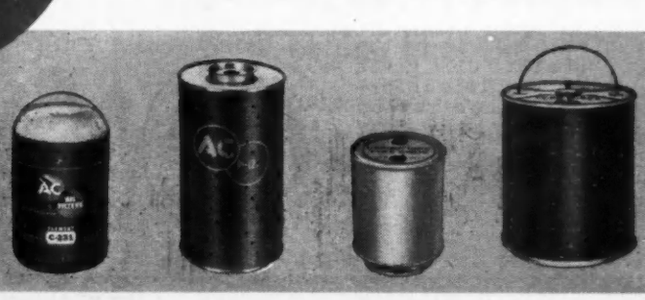
TRUCK AND COACH ENGINES NEED THIS PROVED PROTECTION

AC OIL FILTER ELEMENTS

Every truck and coach engine has its natural enemies too—the dust, dirt, grit and sludge that collect in motor oil—ready to attack smooth-surfaced bearings, pistons and other expensive precision parts.

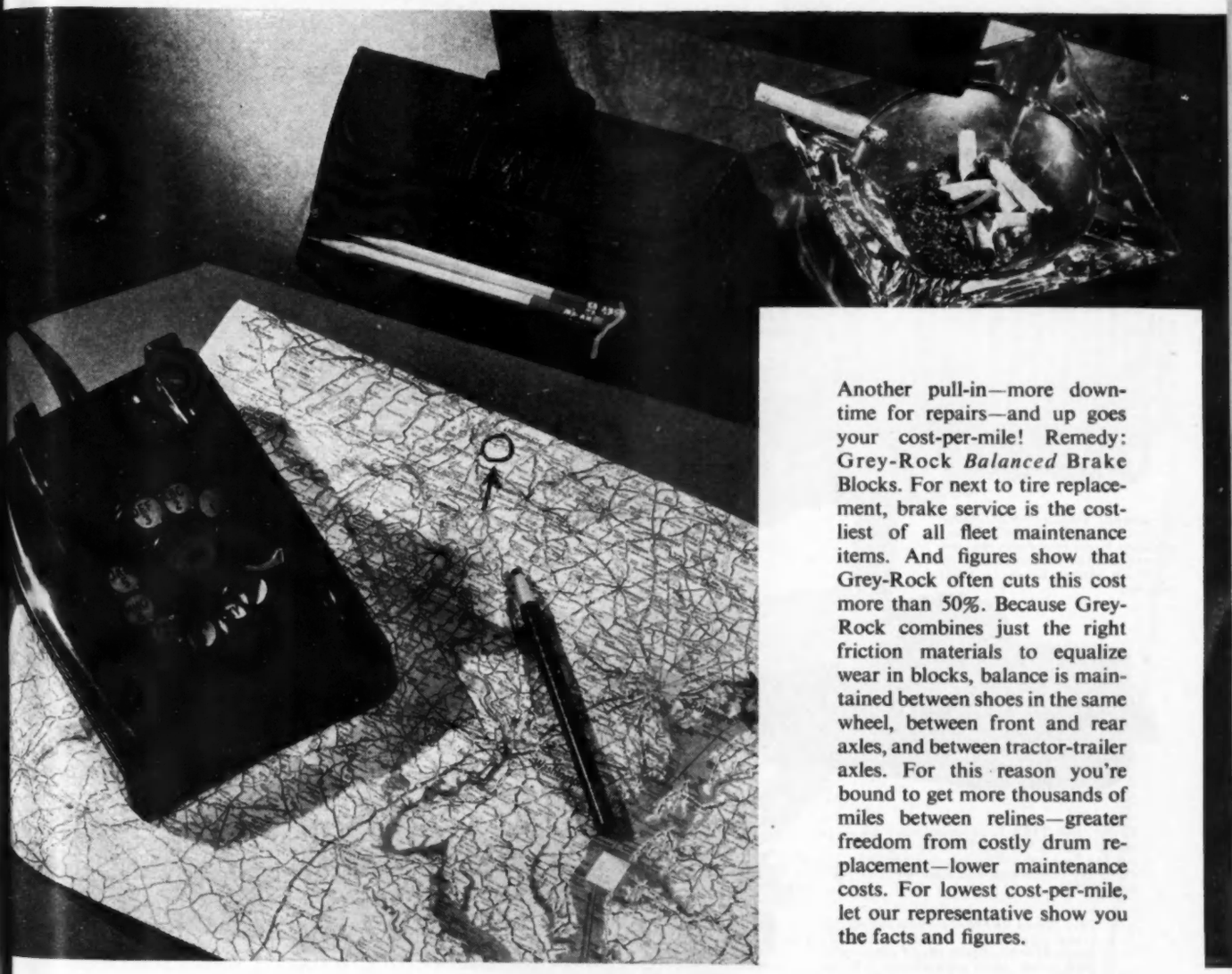
AC Oil Filter Elements provide proved protection against these engine oil enemies. When you standardize on AC Elements for your replacement needs, you *know* that these better elements will take care of an important problem. There's an AC Oil Filter Element engineered to give you top service no matter what makes of engines you have in your fleet.

A BETTER ELEMENT FOR EVERY MAKE OF FILTER



AC SPARK PLUG DIVISION GENERAL MOTORS CORPORATION

"Take the service truck out to route 30; Ed's hung up again with brake trouble!"



Another pull-in—more down-time for repairs—and up goes your cost-per-mile! Remedy: Grey-Rock *Balanced* Brake Blocks. For next to tire replacement, brake service is the costliest of all fleet maintenance items. And figures show that Grey-Rock often cuts this cost more than 50%. Because Grey-Rock combines just the right friction materials to equalize wear in blocks, balance is maintained between shoes in the same wheel, between front and rear axles, and between tractor-trailer axles. For this reason you're bound to get more thousands of miles between relines—greater freedom from costly drum replacement—lower maintenance costs. For lowest cost-per-mile, let our representative show you the facts and figures.

Best to STOP with...
Because they're best
to START with

Only Grey-Rock *makes*

BALANCED BRAKSET LININGS

BALANCED BRAKSETS • TRUCKSETS • BRAKE BLOCKS • VEE-LOK® CLUTCH FACINGS

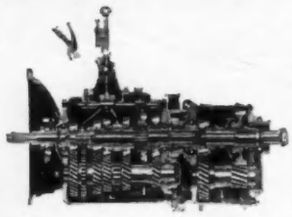
RM

GREY-ROCK DIVISION of Raybestos-Manhattan, Inc., **Manheim, Pa.**
RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks • Clutch Facings
Fan Belts • Radiator Hose • Industrial Rubber, Engineered Plastic, and Sintered Metal Products
Rubber Covered Equipment • Asbestos Textiles • Packings
Abrasive and Diamond Wheels • Bowling Balls

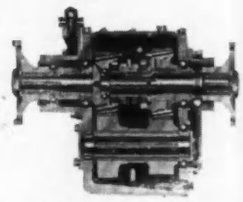
more goods *faster*

From oil to oysters, shirts to steel—modern truckers are boosting business in every industry by hauling *more* goods *faster.* Stepped-up round-trip schedules call for plenty of horses under the hood—delivered through gears with the *right* ratios . . . gears that *shift fast* and *easy* . . . gears that go more miles with *less* maintenance. That's why more truckers today are *specifying* Fuller Transmissions.

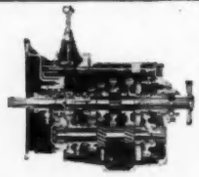
10-speed, single-lever Fuller R-95-C ROADRANGER® Transmissions boost round-trip time on International Tractors used by Johnson Motor Lines to haul textiles.



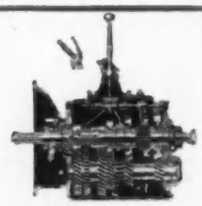
R-95-C



2-B-92

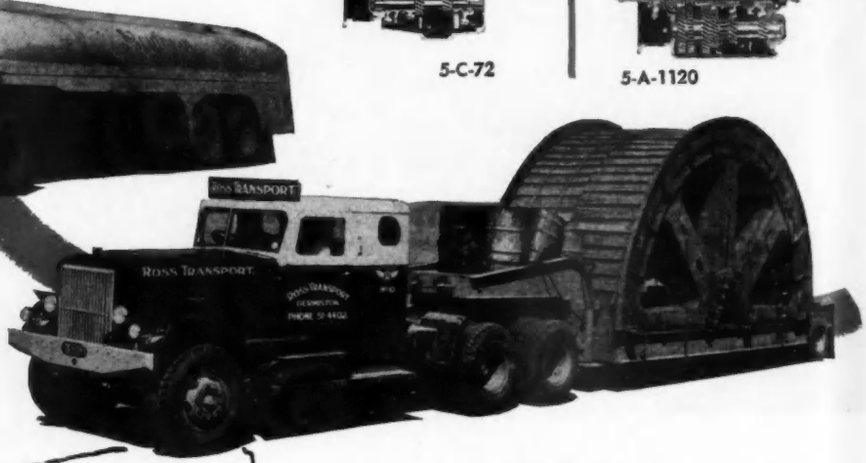


5-C-72



5-A-1120

Fuller 5-A-1120 Transmissions—on Model 910N Diamond T's used to haul oil for Southern Oil Transportation Company—shift fast and easy with 30 tons GVW.



This Ward LaFrance—hauling 40-ton brake shoe for Ross Transport Co., Ltd., South Africa—makes round trips up to 3800 miles. Main transmission is Fuller 5-C-72; auxiliary is Fuller 3-B-92.

110 Models

50 HP TO 400 HP

For any type engine ranging from 330 to 1440 inches—on any type on- or off-highway truck or powered equipment—Fuller's complete line offers a Transmission with the right speeds, the right ratios, to meet the most exacting job requirements.

Fuller TRANSMISSIONS®

FULLER MANUFACTURING COMPANY (Transmission Division), KALAMAZOO, MICHIGAN

Unit Drop Forge Division, Milwaukee 1, Wis. • Western District Branch (Sales & Service—Both Divisions), 641 E. 10th St., Oakland 6, Cal. • Shuler Axle Co., Louisville, Ky. (Subsidiary)

"Wagner Rotary Air Compressors increase diaphragm service life and relieve carbon formation"

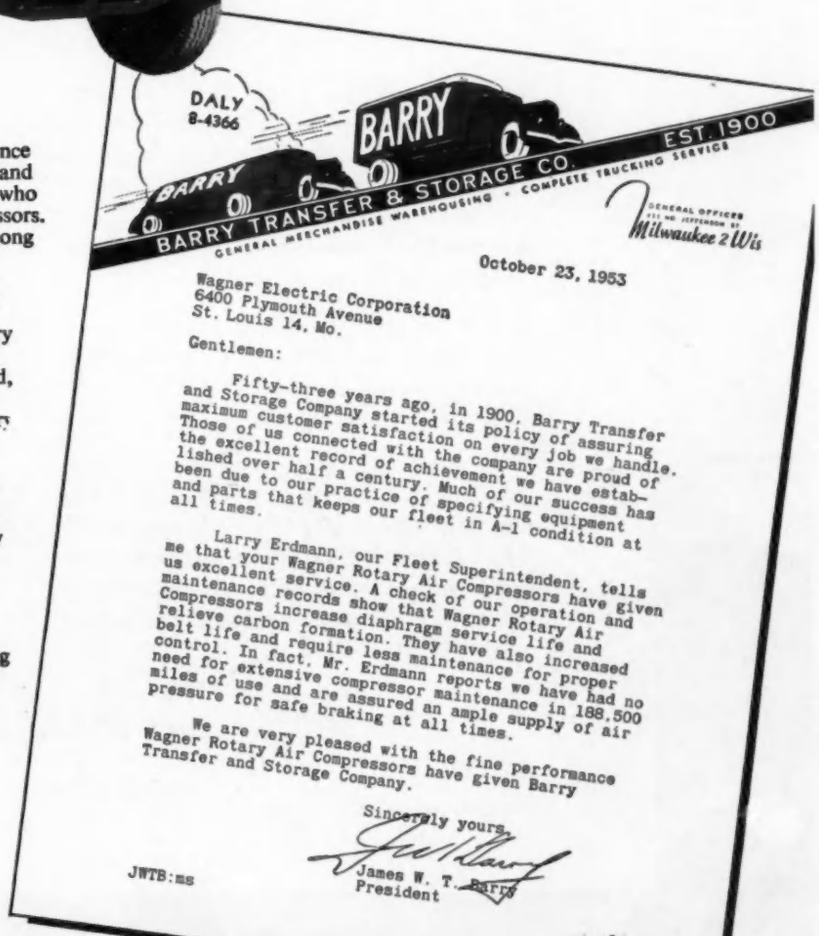
says: James W. T. Barry, President
BARRY TRANSFER & STORAGE COMPANY
Milwaukee, Wisconsin

Barry Transfer and Storage Company's experience is another fine example of proven performance and road-tested reliability gained by fleet operators who install and specify Wagner Rotary Air Compressors. They find, that in addition to added safety and long troublefree service, Wagner Rotary Air Compressors give many economies that save "profit dollars" in lower preventive maintenance costs.

Simple in design, all parts of the Wagner Rotary Air Compressor are easy to install and service. The compressor can be completely disassembled, serviced, and put back in operation in a few hours. The cool operation of the Wagner Rotary Air Compressor prevents carbon formation, and this alone saves hours of cleaning time.

Facts from the field prove that Wagner Rotary Air Compressors will assure your drivers of an adequate supply of air at all times because they have a faster air recovery. This means *greater* road safety for your vehicles, drivers, and payloads.

You'll be money ahead by changing over to Wagner Rotary Air Compressors and specifying them as standard equipment on all the vehicles you order for your fleet. Get all the details, now. Send for your free copy of Wagner Bulletin KU-201.



DALY 8-4366

BARRY TRANSFER & STORAGE CO. EST. 1900
GENERAL MERCHANDISE WAREHOUSING • COMPLETE TRUCKING SERVICE
GENERAL OFFICES 711 W. WISCONSIN AVE. Milwaukee 2 Wis

October 23, 1953

Wagner Electric Corporation
6400 Plymouth Avenue
St. Louis 14, Mo.

Gentlemen:

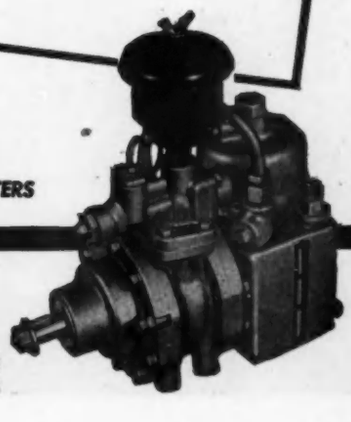
Fifty-three years ago, in 1900, Barry Transfer and Storage Company started its policy of assuring maximum customer satisfaction on every job we handle. Those of us connected with the company are proud of the excellent record of achievement we have established over half a century. Much of our success has been due to our practice of specifying equipment and parts that keeps our fleet in A-1 condition at all times.

Larry Erdmann, our Fleet Superintendent, tells me that your Wagner Rotary Air Compressors have given us excellent service. A check of our operation and maintenance records show that Wagner Rotary Air Compressors increase diaphragm service life and relieve carbon formation. They have also increased belt life and require less maintenance for proper control. In fact, Mr. Erdmann reports we have had no need for extensive compressor maintenance in 188,500 miles of use and are assured an ample supply of air pressure for safe braking at all times.

We are very pleased with the fine performance Wagner Rotary Air Compressors have given Barry Transfer and Storage Company.

Sincerely yours,
James W. T. Barry
President

JWTB:ms



WAGNER AIR BRAKE USERS ARE OUR BIGGEST BOOSTERS

Wagner Electric Corporation

6470 PLYMOUTH AVE., ST. LOUIS 14, MO., U. S. A.
(Branches in Principal Cities in U. S. and in Canada)

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID . . . NoRol . . . CoMaX BRAKE LINING . . . AIR BRAKES . . . TACHOGRAPHS . . . ELECTRIC MOTORS . . . TRANSFORMERS . . . INDUSTRIAL BRAKES

K54-8

We shrank the length to swell your profits

TAKE a look at the dimensions of this new GMC Diesel. There's just 72 cozy inches from bumper to back-of-cab. That's your tip-off on the way they make room for a hefty boost in your payload—no matter what state length limits you're up against.

Their design is completely new. Every inch goes to work. But don't think we've cut in on the driver's elbow room to hit our target!

The new cabs are spacious by any yardstick. The new 96-inch sleeper version has plenty of room for a full 24-inch bunk. Even then, there's more than ample clearance for hauling a completely square-nosed 35-footer within 45-foot laws.

And remember—we're not talking about just one truck. You take your pick from a wide range of c.o.e. models. You've got a choice in wheelbases. You can select from cost-cutting gasoline or 2-cycle Diesel power. You can choose either single or tandem axles.

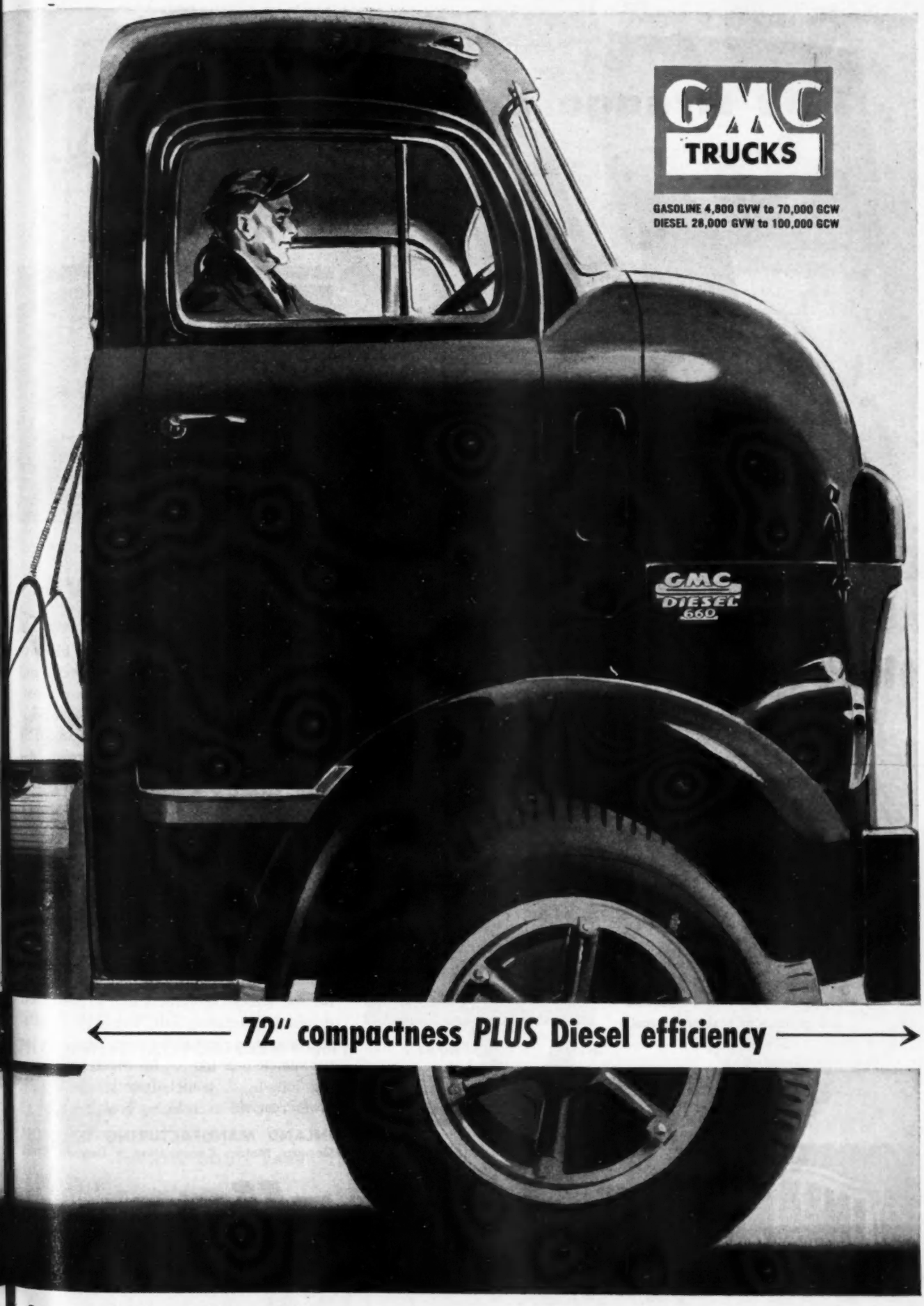
Within this selection, you're bound to find a space-saving c.o.e. that's made to order for your job. There's a great new GMC to haul more—and earn more — in any 30,000 GVW — 65,000 GCW operation.

So drop in on your GMC dealer. Find out how easy it is—and how little it costs — to make your cross-country hauling pay off bigger than ever before!

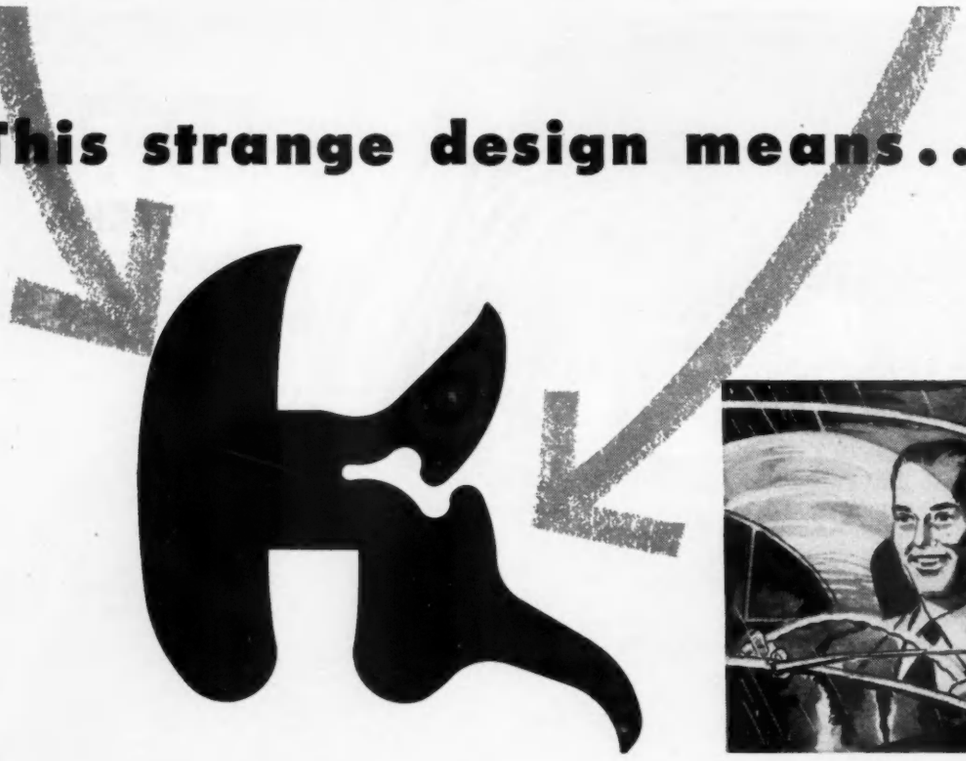
GMC Truck & Coach Division of General Motors

Be careful—drive safely

Get a modern truck!


GMC
TRUCKS
GASOLINE 4,800 GVW to 70,000 GCW
DIESEL 26,000 GVW to 100,000 GCW
GMC
DIESEL
660
72" compactness PLUS Diesel efficiency

This strange design means...



windshields and fixed windows

that *never* leak!

That peculiar image above *might* be anything. Just *look* at all those sharply cut and rounded convolutions! Actually it's a cross-section, greatly enlarged, of Inland Self-Sealing Weather Strip, used on the windshield of a popular passenger car. And the curves, flat surfaces, corners and angles are *precisely* designed, dimensioned and produced . . . *to assure complete and permanent leak-proofing!* No leaks at *all* . . . *ever!*

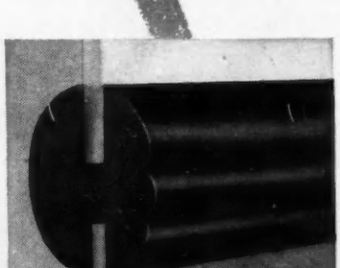
It's an *unique* Inland idea and product . . . employing the basic principle of resilient rubber, constantly compressed . . . a seal that locks itself for keeps, without cement or binders. See *how*, below!

Inland Self-Sealing Weather Strip is *best* for the vehicle manufacturer . . . using less material, permitting fast, one-man installation that cuts production cost. And *best* for the vehicle user too . . . for much *safer* driving long-lived, trouble-free service, much lower cost when replacing broken glass!

INLAND MANUFACTURING DIVISION
General Motors Corporation • Dayton, Ohio

Here's how it works!

One of the simplest forms of Inland Self-Sealing Weather Strip is shown here. The Strip goes into the body panel or other opening. Then the glass goes into the Strip. Then the over-size filler strip goes into the locking channel, expanding it, compressing the whole Inland Self-Sealing Weather Strip into a complete and permanent leak-proof seal!



INLAND MANUFACTURING

Self-Sealing WEATHER STRIP

A Sweetheart of a Truck that Saves You Money

YOU save with a White 3000 in *many* ways.

In city and suburban delivery service, the short wheelbase, wide tread front axle and short turning radius save so much time in traffic . . . save drivers' nerves, too.

You save on delivery costs because the White 3000 permits use of an extra-capacity body yet reduces over-all length for *more* deliveries per day!

Maintenance savings, too, with the quick, easy power-lift cab for complete accessibility at the turn of the wrist.

And its modern, functional appearance attracts attention . . . stays new . . . year after year. No doubt about the White 3000 . . . it's a Sweetheart!

THE WHITE MOTOR COMPANY • Cleveland 1, Ohio

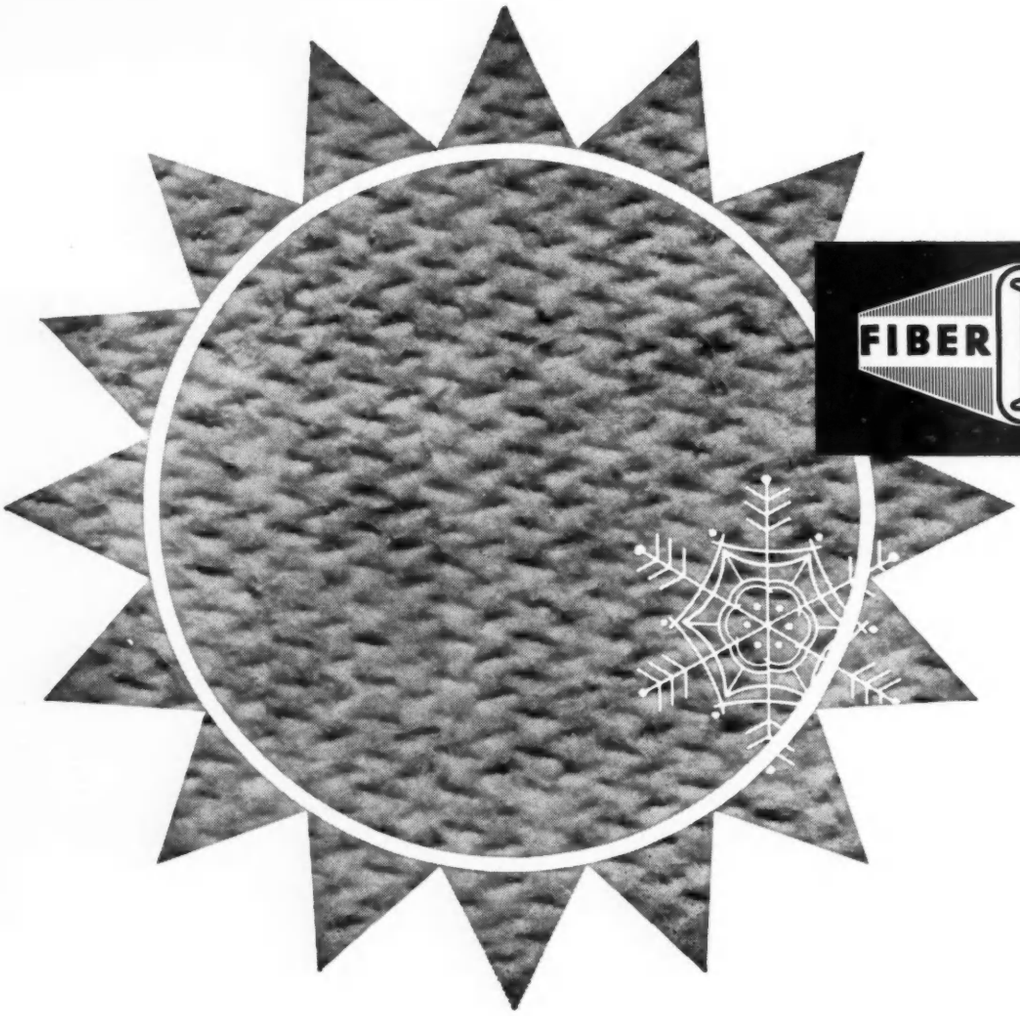
They like the looks . . . and the payload of the White 3000

Continental Baking Company has modern White 3000's in service in many cities. The exclusive payload advantage of the Whites is important in transport service of baked goods, as well as in wholesale delivery. New Model 3020's in service in New York have 21-ft. 4-in. bodies with only 181½-in. wheelbase.

White 3000

For More Than 50 Years The Greatest Name In Trucks

WHITE 3000 SAVES TIME . . . SPACE IN TRAFFIC



for real payload protection against temperature extremes...use the best in insulation—Pittsburgh Superfine

Unlike conventional coarse fiber glass insulation, Pittsburgh Superfine is composed of glass filaments that are many times smaller in diameter—thereby tremendously increasing its ability to insulate against heat and cold. This feature also means that Superfine takes less space or thickness for effective insulation.

It is in actual application, however, that Pittsburgh Superfine saves you money. Extremely easy to handle and quickly applied by adhesives, taping or tacking, Superfine saves time, cuts installation labor costs substantially. Made to order for production line use, Pittsburgh Superfine is available in all standard roll widths or slit widths required, in a variety of densities to meet your particular needs. And if you require special facings, Pittsburgh Superfine can be supplied with a variety of aluminum, cloth, paper or vinyl facings.

Be sure you have all of the facts on Pittsburgh Superfine —write for technical information or technical staff assistance to our executive offices or district sales offices in Chicago, Cincinnati, Cleveland, Detroit, New York or Washington. Pittsburgh Plate Glass Company, Fiber Glass Division, One Gateway Center, Pittsburgh 22, Pa.

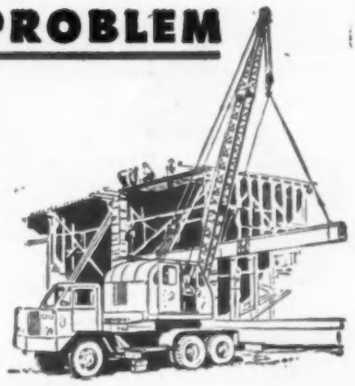
FIBER PPG GLASS PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

ANOTHER POWER TRANSMISSION PROBLEM

SOLVED for SURE

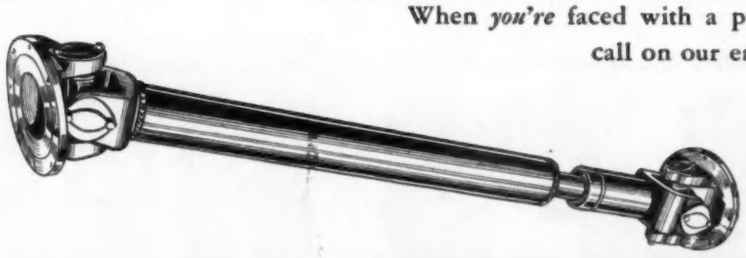
with BLOOD BROTHERS drive line assemblies



Three Blood Brothers Assemblies get the power through on this Michigan TLDT-20 Truck-Crane.

Getting real "lugging ability" in soft sand *plus* fast road speeds poses many problems. For years, the builders of Michigan Truck-Cranes and Shovels have solved their power transmission problems with Blood Brothers Drive Line Assemblies.

On this tandem drive machine, three Blood Brothers Assemblies deliver maximum engine torque equally divided between the axles. When *you're* faced with a power transmission problem, call on our engineers. Chances are, they'll help you "solve it for sure!"



UNIVERSAL JOINTS
AND DRIVE LINE ASSEMBLIES

BLOOD BROTHERS machine division
Rockwell Spring and Axle Company
ALLEGAN, MICHIGAN

ARE YOUR PROFITS "WORSE FOR WEAR"?

CHANGE TO WOLF'S HEAD–100% PURE PENNSYLVANIA

Don't let excessive engine wear and parts replacement eat into profits. Give your fleet *complete protection* with either WOLF'S HEAD Motor Oil or WOLF'S HEAD Heavy Duty Oil, plus the free benefits of the WOLF'S HEAD Laboratory Control Plan.

WOLF'S HEAD Motor Oil—100% Pure Pennsylvania—is Scientifically Fortified. It keeps engines clean and fully protected against unnecessary wear, power-robbing sludge and deposits. WOLF'S HEAD HEAVY DUTY meets *every* requirement for *severe* heavy duty service. It is approved by Caterpillar, General Motors and U. S. Army Specification MIL-0-2104!

The WOLF'S HEAD LABORATORY CONTROL PLAN, free and without obligation, gives you specific recommendations for each fleet unit, based on analysis of crankcase oil. Helps establish correct drain periods, conserves engine life—keeps your trucks on the go. Write for complete details.

FREE! "RULES OF THE ROAD" Folder. Contains driving information, traffic rules, speed laws for all states. Give them to your drivers.

WOLF'S HEAD OIL REFINING CO., INC., OIL CITY, PA., NEW YORK 10, N. Y.

WOLF'S HEAD

MOTOR OIL AND LUBES

100% Pure Pennsylvania Scientifically Fortified — Member, Penna. Grade Crude Oil Association

How to reduce brake block cost-per-mile

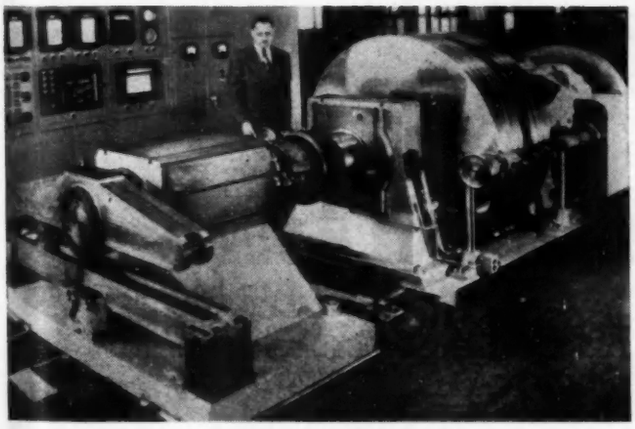
Ask yourself these questions — you may profit from the answers

"Can I lengthen the time between brake overhauls?"

With the right combination of brake blocks you can. Raybestos factory-packaged combinations will give you better all-around performance—good deceleration, non-fading action, and long wear.

"Can I measure brake block cost by price?"

No. Ordinary and inferior brake blocks may cost you less initially, but they deliver a lot less mileage than Raybestos blocks do. With Raybestos blocks you need fewer relines and save on reline labor costs.



"Will I make any other savings with Raybestos blocks?"

Yes, dynamometer and Proving Ground Tests prove that Raybestos blocks will also reduce labor costs of "too frequent" adjustments, costs involved in downtime and pull-ins, costs caused by drum damage, and extra check-up costs due to non-uniform performance.

"Will any other Raybestos products reduce my costs?"

Yes, your costs can be still further reduced by using Raybestos Ray-Lok and Ray-Metl Clutch Facings. And, if you have light and medium vehicles in your fleet, by using Raybestos PGT Truck Sets or Raybestos Lined Brake Shoes—either riveted or bonded.

To learn more about the savings Raybestos can give you, ask your Jobber Salesman about the unique Raybestos Fleet Engineering Plan

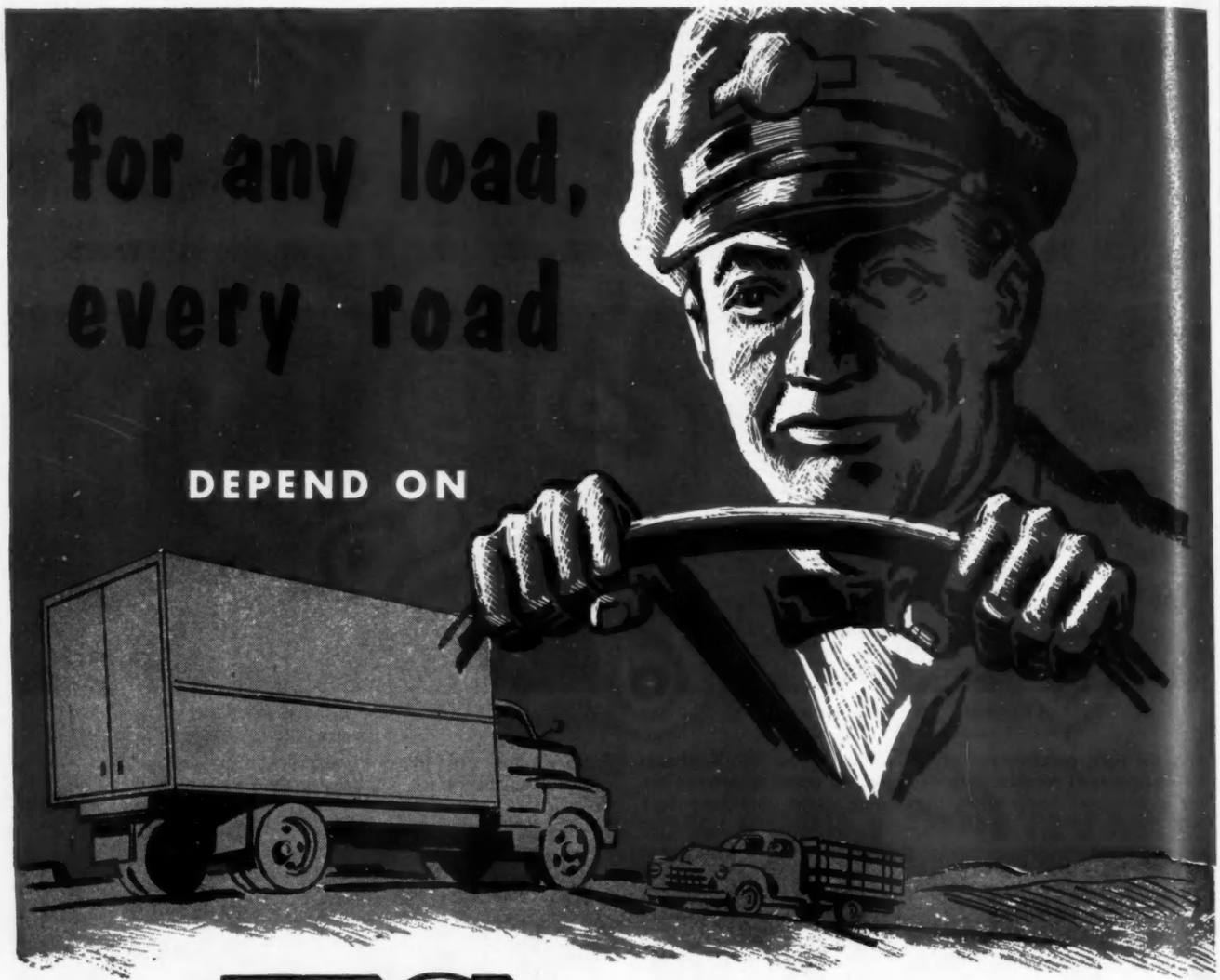
Raybestos®

GET IT FROM YOUR JOBBER

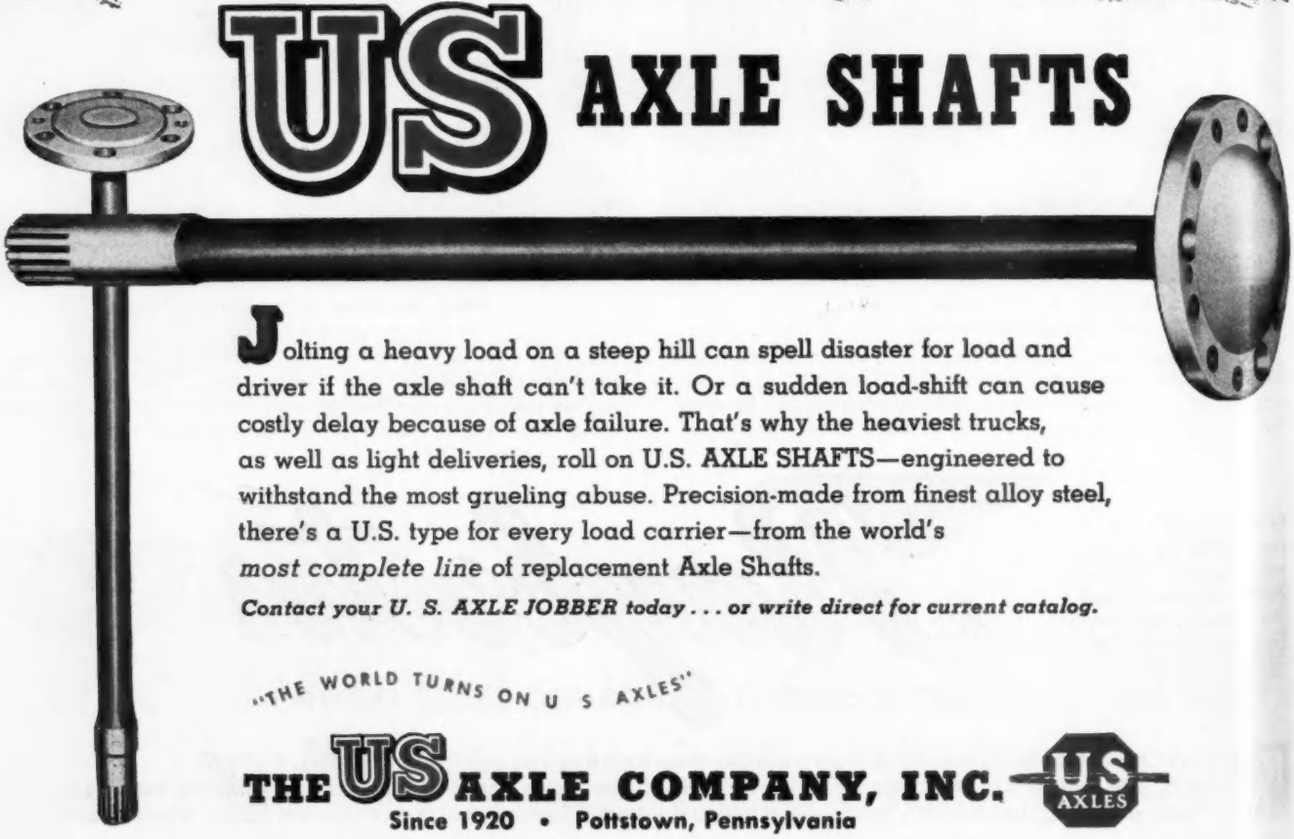
AMERICA'S BIGGEST SELLING BRAKE LINING

RAYBESTOS DIVISION of Raybestos-Manhattan, Inc., BRIDGEPORT, CONN.

RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks • Clutch Facings • Fan Belts • Radiator Hose • Industrial Rubber, Engineered Plastic, and Sintered Metal Products • Rubber Covered Equipment • Asbestos Textiles • Packings • Abrasive and Diamond Wheels • Bowling Balls



US AXLE SHAFTS



Jolting a heavy load on a steep hill can spell disaster for load and driver if the axle shaft can't take it. Or a sudden load-shift can cause costly delay because of axle failure. That's why the heaviest trucks, as well as light deliveries, roll on U.S. AXLE SHAFTS—engineered to withstand the most grueling abuse. Precision-made from finest alloy steel, there's a U.S. type for every load carrier—from the world's *most complete line* of replacement Axle Shafts.

Contact your U. S. AXLE JOBBER today . . . or write direct for current catalog.

"THE WORLD TURNS ON U S AXLES"

THE US AXLE COMPANY, INC.

Since 1920 • Pottstown, Pennsylvania

US AXLES

Watson Bros. finds—

"National Oil Seal stocks help keep repair costs down..."

Every 24 hours, the 2,200 units of Watson Bros. Transportation Company, Omaha, travel a distance equal to six times around the world. This means tractors operate almost constantly; it also means shop maintenance must be fast and effective.

To be sure bearings and assemblies get the best possible protection, Watson Bros. install new oil seals every time old seals are removed. The job is done better, and no down time is lost getting seals since National Oil Seals are stocked in all Watson Bros. shops.

The net result is fewer repairs, less down time, lower repair costs—plus operating dependability that keeps customers happy.

NATIONAL OIL SEAL STOCKS TAILORED TO YOUR FLEET!

Why not follow the lead of America's foremost fleets? Speed repairs, get a better job, by stocking seals in your shop. National Oil Seal Distributors will gladly *install and maintain* stocks tailored exactly to your fleet's requirements. You'll save time and trouble, and economize on seal purchases too. Call the nearest National Distributor about it today!

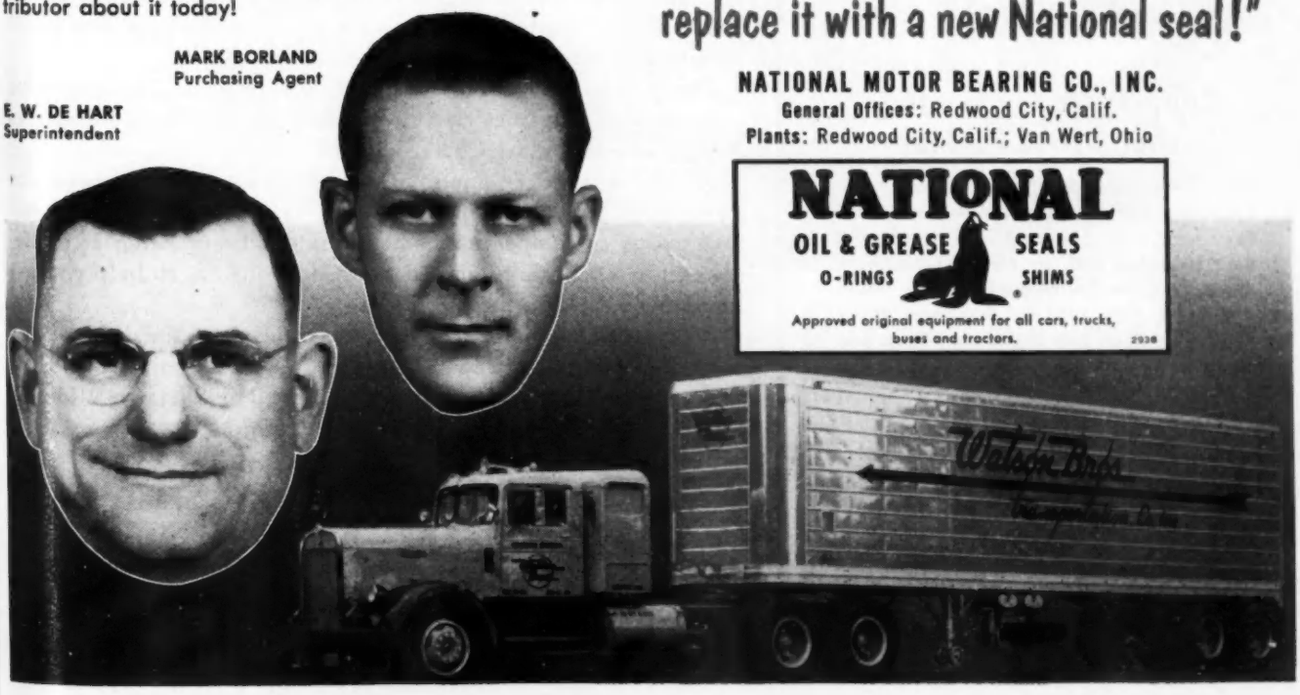
MARK BORLAND
Purchasing Agent

E. W. DE HART
Superintendent

"Every time you take out an oil seal, replace it with a new National seal!"

NATIONAL MOTOR BEARING CO., INC.
General Offices: Redwood City, Calif.
Plants: Redwood City, Calif.; Van Wert, Ohio

NATIONAL
OIL & GREASE SEALS
O-RINGS SHIMS
Approved original equipment for all cars, trucks, buses and tractors.
2938



RIDE-INVITING FRESHNESS the year 'round with KEM® TRANSPORT ENAMELS

APPROVED for leading NATIONAL FLEETS

Sherwin-Williams KEM Transport Enamels are approved and recommended finishes for the fleet equipment of many leading national fleet operators such as National Trailways Bus System, The Coca-Cola Company, Allied Van Lines, City Products Company, Dad's Root Beer, Gray Line Sightseeing Tours and many others.

Here's the gleaming, carefree finish that was born to keep transport equipment fresh and new looking. For intercity buses, for example, it's loaded with ride appeal . . . helps attract fares with its sparkling beauty. It keeps its freshness for more months, more miles . . . despite hard usage and constant exposure to all kinds of weather.

That's why National Trailways Bus System, Chicago—like many other companies operating large national fleets—approves KEM Transport Enamels as standard finishes.

KEM Transport Enamels cut repainting time, too. They reduce costly lay-ups of equipment . . . dry fast even under abnormal conditions of temperature and humidity. Every batch is triple-tested for fast drying under these conditions . . . to help you get equipment back on the job faster.

Find out what these long-lasting, timesaving finishes can do for you. Call your Sherwin-Williams "OK" Automotive Jobber, or write for name of nearest distributor. The Sherwin-Williams Co., Automotive Division, Cleveland 1, Ohio.

SHERWIN-WILLIAMS
AUTOMOTIVE FINISHES

Fleets of

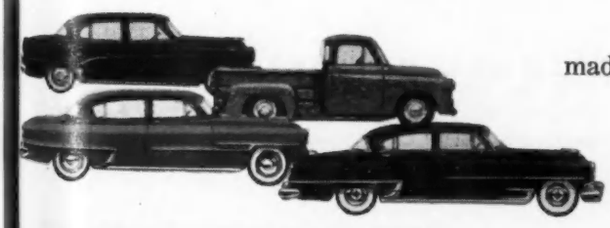
Plymouth · Dodge
De Soto · Chrysler
cars and
Dodge Trucks
operate

BEST

with

Genuine Chrysler Corporation parts and accessories

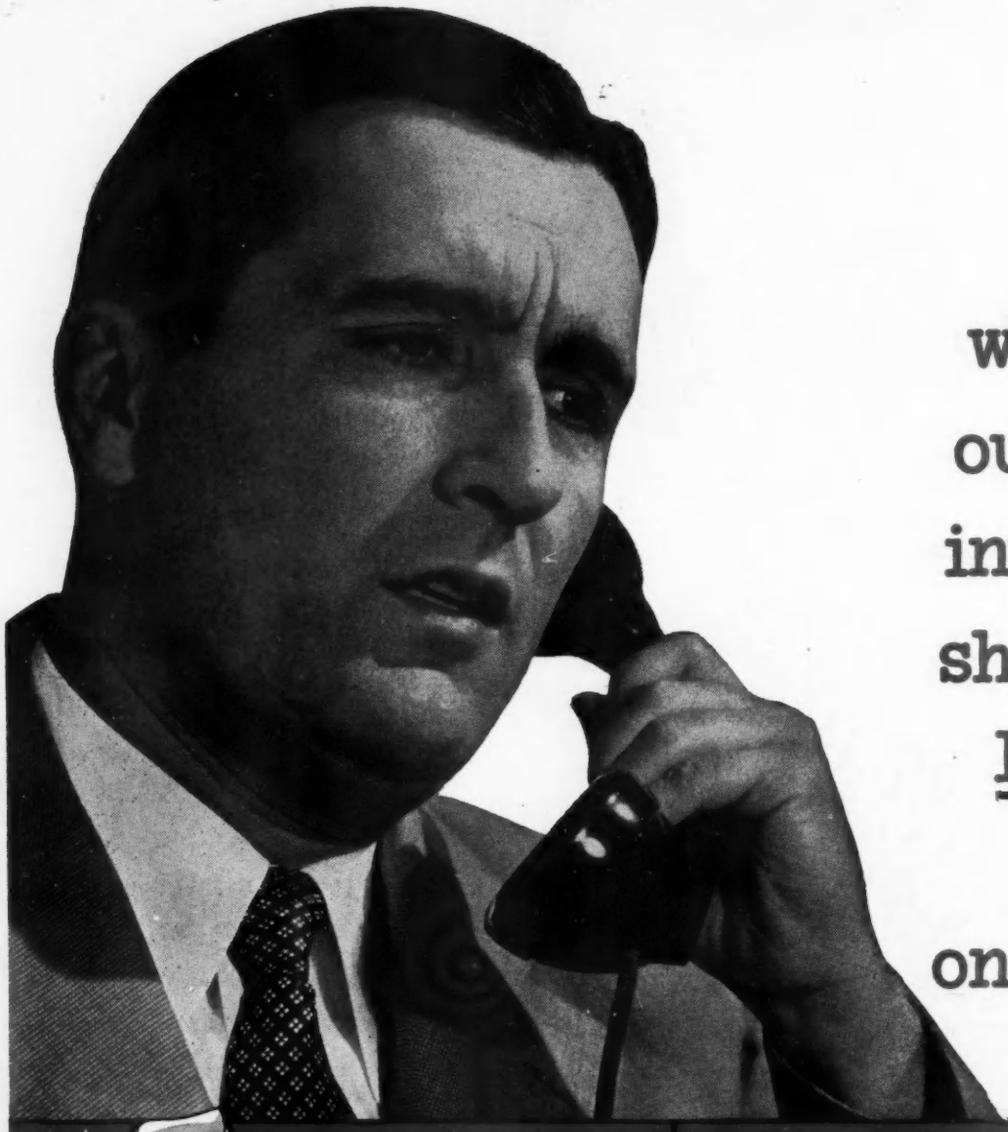
It pays, in time and money saved, to use only parts specially engineered by the manufacturer for the vehicles in your fleet.
With Chrysler Corporation cars and trucks, that means MoPar!



Always use MoPar and be *sure* of parts that are made right, that fit right, that work right.

Look for the MoPar sign. You'll find this sign displayed by thousands of Chrysler Corporation dealers and general repair shops everywhere.

CHRYSLER CORPORATION · PARTS DIVISION · DETROIT 31, MICHIGAN



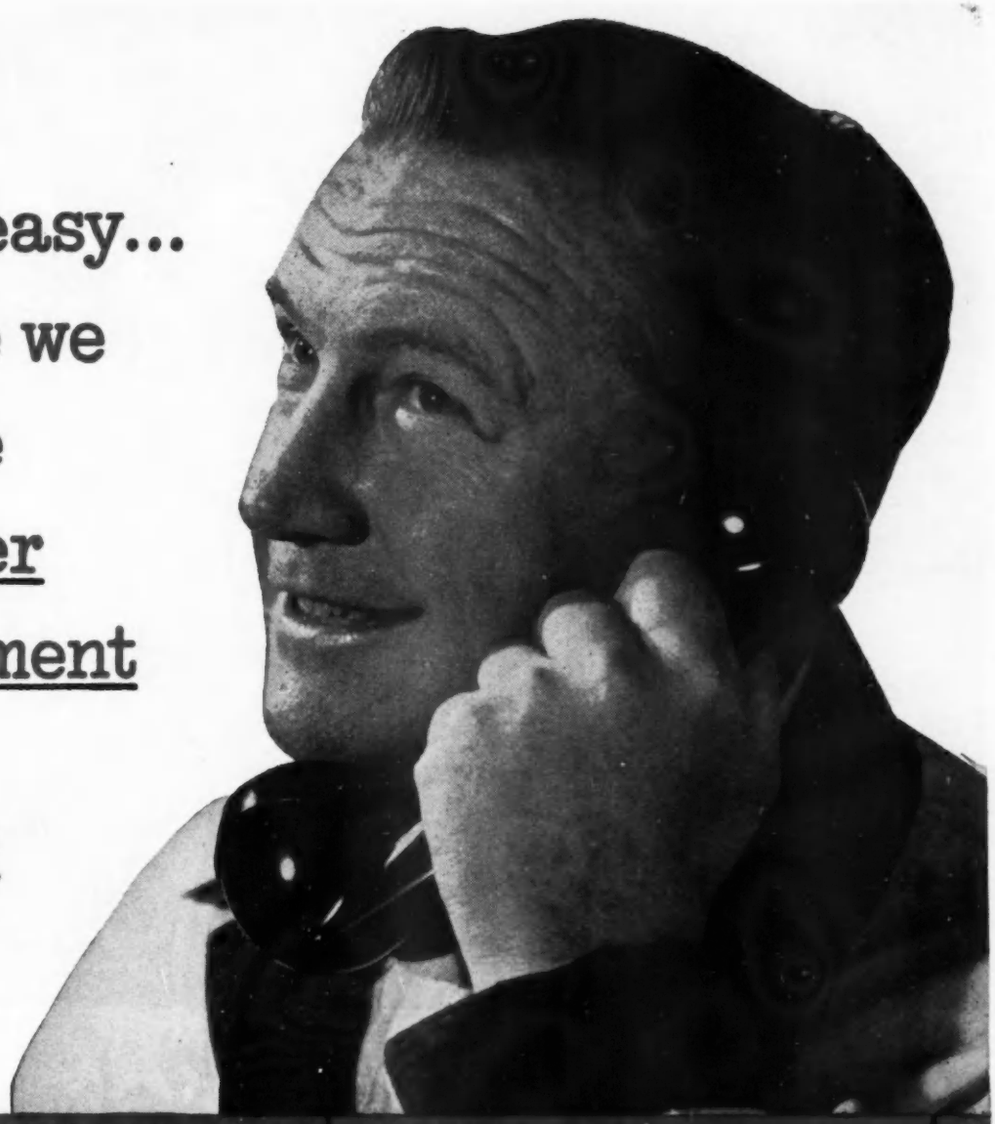
"Jim, why does our cable inventory show only Packard Cable on hand?"

PACKARD BATTERY CABLE—*Packard battery cables are used as original equipment on more cars, trucks, buses and tractors than cables of any other make. Packard battery cables are full size, full weight . . . are available with* **LEAD-ALLOY** *terminals or leaded brass terminals. Both types are packaged in individual cartons—both deliver top performance—both have acceptance, everywhere.*

Packard cable—ignition, battery, lighting—is the preferred cable of the automotive industry—more vehicles are equipped with Packard cable than with any other. In the replacement field, too, Packard is preferred because it yields *more miles per replacement,* which is another way of saying it leads to *lower operating costs.* See your Packard jobber . . . equip all your vehicles with Packard.

FOREMOST BUILDER OF AUTOMOTIVE WIRING

"That's easy... because we get more miles per replacement with Packard Cable."



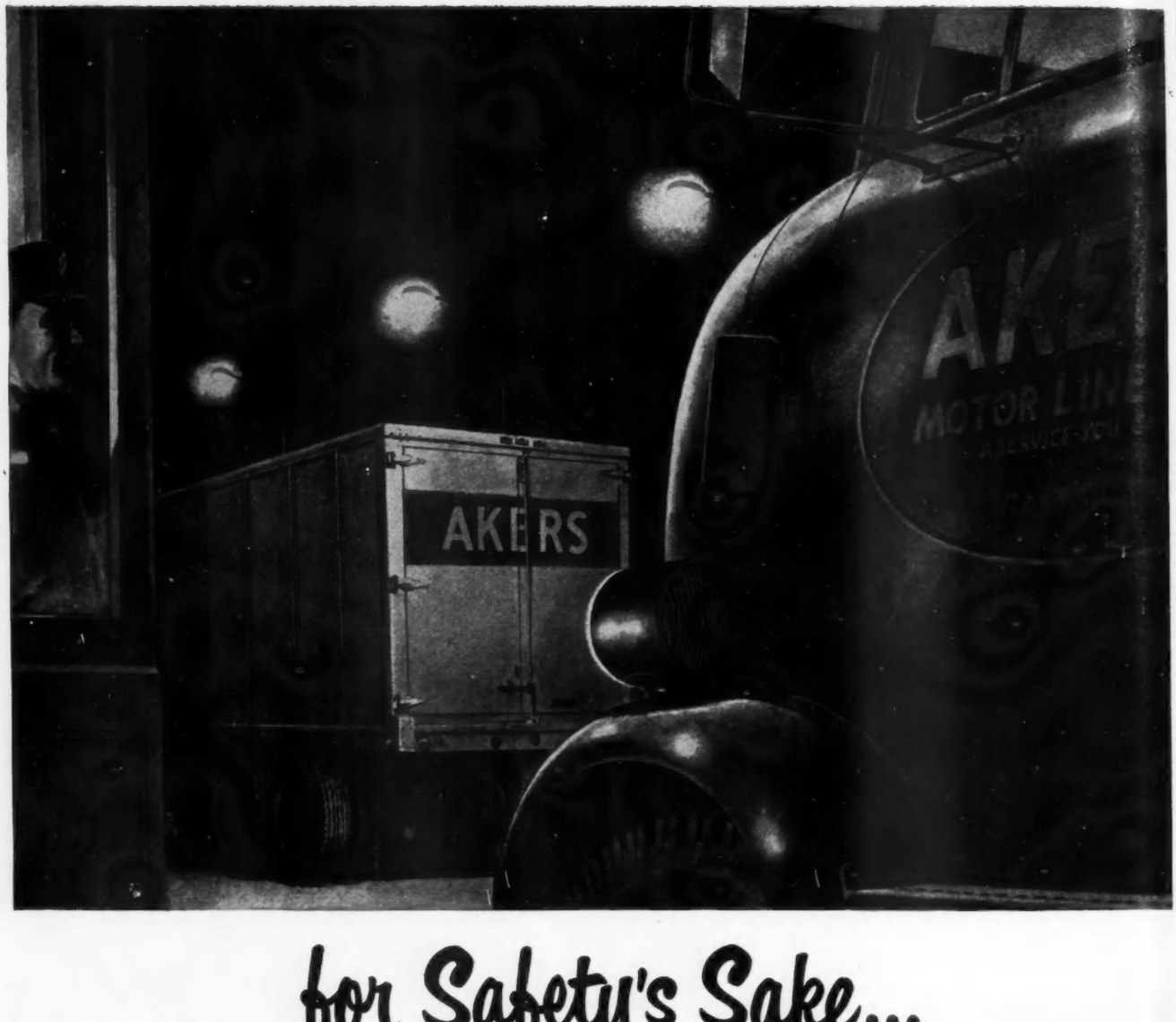
PACKARD IGNITION CABLE—*Long considered the standard of the automotive industry, Packard high-tension cable is original equipment on more cars, trucks, buses and tractors than any other cable. Packard* **FOUR-FORTY** *and Packard* **LAC-KARD** *ignition cables are designed to deliver balanced performance in every application. For dependability on the job, choose Packard!*

PACKARD LOW-TENSION CABLE—*As with Packard's two other products, Packard low-tension cable is used as original equipment on more cars, trucks, buses and tractors than cable of any other make. Packard's* **249 COMPOUND** *insulation, by every laboratory test and by the test of long, hard usage in the field, has exceptional resistance to heat, oil, chemicals and abrasion.*

Packard
REG. U.S. PAT. OFF.
TRADE-MARK

Packard Electric Division
General Motors Corporation
Warren, Ohio

A GENERAL MOTORS PRODUCT GM GENERAL MOTORS UNITED SERVICE MOTORS **A UNITED MOTORS LINE**



for Safety's Sake...

wherever you turn you'll see Signal-Stats!

Actual counts at key highway points all over the nation show more trucks use Signal-Stat directional signals than all other makes combined. Check and see for yourself.

Ask Akers, or almost any operator and you'll find they insist on Signal-Stat. They know the best investment—for safety wherever they turn—is superior Signal-Stat rimless lamps and dependable Signal-Stat Switches.

Signal-Stat Class A—Type 1 Lamps are available in *King Size* (SIGSTAT) or *Regular* (ACRYSTAT). Both sizes are identical in quality—differ only in size and price.

Approved and legal in all 48 States and the District of Columbia

AKERS MOTOR LINES, INC. GASTONIA, N. C. say:

"We use Signal-Stat practically 100% on our over-the-road equipment. All turn signals we have to replace on vehicles not already equipped with Signal-Stat, we replace with Signal-Stat."

Signal-Stat

THE LARGEST PRODUCER OF DIRECTIONAL SIGNALS FOR COMMERCIAL VEHICLES

SIGNAL-STAT CORPORATION, Signal-Stat Building, 523-539 Kent Ave., Brooklyn 11, N.Y.

"With delays in cement delivery costing $300 to $400, we can't afford not to use NYLON CORD TIRES"

"When one of our 35,000-pound to 40,000-pound loads of bulk cement is delayed because of a tire failure, the giant cement-mixing equipment of our contractor customers may be put out of action," says Robert C. Schutt, President of John Schutt, Jr., Inc., of Buffalo. "Such a delay can cost our customers up to $400—strain relations, to say the least. That's why we use NYLON CORD TIRES. Our records prove that nylon cords give us 80,000 to well over 100,000 miles of service and eliminate trouble. Heat blowouts are now a thing of the past. NYLON CORD TIRES are saving us money. But even if they weren't, we couldn't afford to be without them."

Whether your fleet is large or small, you can make this test. Try a set of nylon cord tires and see how their remarkable resistance to bruising permits them to take hard body punches and safely support even your heaviest loads. See how they reduce road delays and body failures . . . give a lower cost per mile. Ask your dealer about nylon cord tires today. (Du Pont makes nylon fibers, does not produce tires. A number of rubber companies have nylon cord tires available.)

• • •

***FREE BOOKLET** on nylon tires — write for your copy. Textile Fibers Dept., Room 2528-J-2, E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.*

NYLON CORDS PROTECT AGAINST ALL THESE CAUSES OF TIRE FAILURE

HEAT—Nylon cords can withstand hotter temperatures than a tire will ever encounter on the highway in normal operations.

FLEX FATIGUE—Nylon's resilient strength makes tire cord stand up under the complex compression-tension flexing that takes place every time a tire turns—reduces flex-fatigue failure.

BRUISE DAMAGE—Nylon's toughness virtually ends cord ruptures caused by tires hitting curbs and holes at high speeds.

MOISTURE—Nylon minimizes tire failures caused by moisture seeping into cuts. Nylon's "water resistance" is one of the reasons it's so popular for fishing lines and commercial fishing nets.

DU PONT REG. U.S. PAT. OFF. **NYLON** for **TIRE CORD**

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Watch "Cavalcade of America" *on Television.*

4 times greater resistance to trouble!

OTHER THERMOID HEAVY DUTY PRODUCTS FOR COMMERCIAL FLEETS

BRAKE FLUID

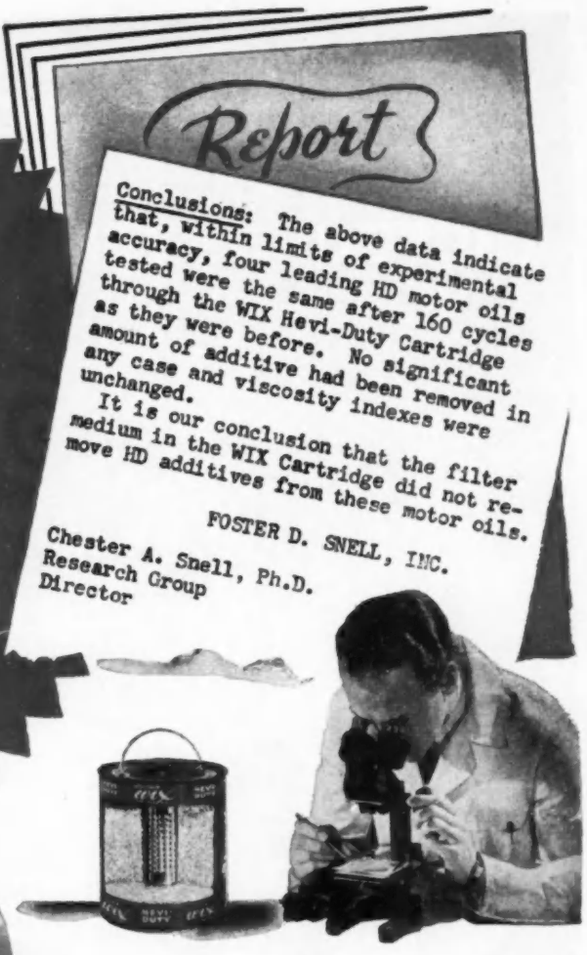
Thermoid BT Neoprene Radiator Hose is built to meet the most severe conditions of bus and truck operation. Neoprene both inside and out, it provides four times greater resistance to oil, grease and gas fumes . . . withstands 100° higher outside temperatures than ordinary hose . . . will not char or blister. Plied cord construction allows flexibility that withstands misalignment and vibration. Test Thermoid BT Neoprene Hose on the toughest job in your fleet.

Thermoid

Thermoid Company • Trenton, New Jersey

Brake Linings • Fan Belts • Radiator Hose • Hydraulic Brake Parts and Fluid • Car Mats • Clutch Facings • Thermoid Precision Process Equipment.

WIXITE DOES NOT REMOVE H.D. ADDITIVES!


Report
Conclusions: The above data indicate that, within limits of experimental accuracy, four leading HD motor oils tested were the same after 160 cycles through the WIX Hevi-Duty Cartridge as they were before. No significant amount of additive had been removed in any case and viscosity indexes were unchanged.
It is our conclusion that the filter medium in the WIX Cartridge did not remove HD additives from these motor oils.
FOSTER D. SNELL, INC.
Chester A. Snell, Ph.D.
Research Group
Director

Here's scientific laboratory proof!

Once again WIX Oil Filter Cartridges prove their superior performance with —

WIXITE
(PATENT PENDING)

The Modern Depth Type Filtrant for Modern Oils and Partial Flow Filtration System Engines.

CHECK THE FILTER WHEN YOU CHECK THE OIL—AND CHANGE TO WIX

GET THE DIRT *OUT* — LEAVE THE ADDITIVES *IN*

WIX-PAX SERVICE FOR FLEETS

You can chop dollars off your oil filtration costs with this money-saving WIX-PAX Service! It brings you genuine, top grade WIX Filter Cartridges direct from the factory or nearest warehouse . . . in full cartons (12 Can Type, 12 or 24 Sock Type) in PREPAID shipments of 100 lbs. or more. Order through your local WIX Wholesaler for direct factory shipment.

GET IT FROM YOUR JOBBER

wix TRADEMARK REG.

ENGINEERED FILTRATION

OIL FILTERS / CARTRIDGES

WIX CORPORATION · GASTONIA N. C.

IN CANADA: WIX ACCESSORIES CORP. LTD., TORONTO

new COOPER MILE-MASTER increases mileage up to 45% (honestly)

...and at regular truck tire prices

Mileage percentages are sometimes confusing. That's why we stress this fact: The new Cooper Mile-Master increases truck tire mileage up to 45% (honestly). And this big increase proved by actual tests on America's best known truck fleets. Not just another favorable new tire mileage percentage. Not just another figure out of thin air. The new Cooper Mile-Master is truly a great new truck tire. And your Cooper dealer is ready to honestly prove our claim. Call him soon.

New Shock-Guard Construction: (1) Extra layers of cushioning and (2) full double cord breakers guard against high heat flexing, bruises, breaks, blowouts. Result: Cooler running, fewer failures.

New Flat Contour Tread: More rubber on the road, more contact area to carry the load. More stopping and starting power. More stability for the vehicle. Far less danger of uneven tread wear.

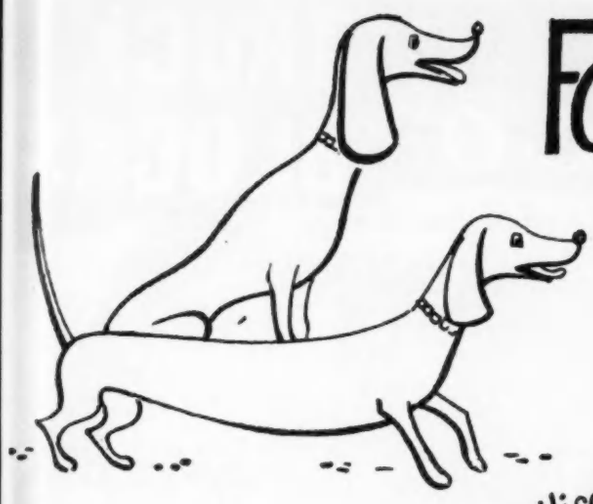
New Controlled Growth Rate: More recaps, better recaps. New Shock-Guard construction cushions away cord-stretching shock and strain. Cooper Armored Rayon-Cord fights fatigue and excess growth.

New Mile-Master Rubber: A combination of micro-fine carbon black, premium grade natural rubber and triple-mixing. Defies wear, heat, cracking. Gives mileage increases up to 45% (honestly).

Cooper TIRES

COOPER TIRE & RUBBER COMPANY, Factories at Findlay, Ohio

TIRES • TUBES • BATTERIES • CAMELBACK • INDUSTRIAL RUBBER PRODUCTS



For Your Long Wheelbase Jobs!

Specifically

New Hercules KDLL Hoist, Engineered for 9 and 10 Ft. Dump Bodies

Here's a doggone good bet for boosting hoisting efficiency 25%! The new Hercules KDLL Hoist is designed specifically for your hauling needs on 1½-2 ton longer wheelbase (72" and 84" cab-to-axle) trucks utilizing 9 and 10 ft. bodies.

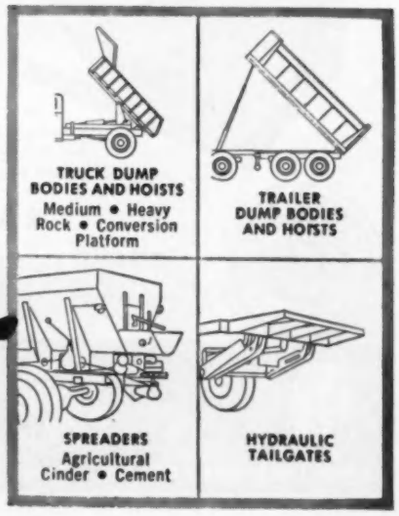
Incorporating heavy duty hoist construction, the KDLL features stronger boxed and reinforced girder-type lift arms; 50% longer piston stroke; larger piston rod diameter plus a longer "built-in" dimension for greater lifting leverage.

For dumping, spreading batchwork . . . hopper, hand, or power shovel loading . . . the Hercules KDLL Hoist gets your jobs done faster. Get complete information—write, wire, or phone today.

Hercules

buy from the line of strongest design

HERCULES STEEL PRODUCTS CORPORATION • GALION, OHIO


TRUCK DUMP BODIES AND HOISTS
Medium • Heavy Rock • Conversion Platform
TRAILER DUMP BODIES AND HOISTS
SPREADERS
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HYDRAULIC TAILGATES

LOWER PRICES ON *Lasco* TRUCK BLOCKS

HUGE SALES *have* LOWERED PRICES!

LASCO SUPER BLOX
America's Finest Brake Lining, is available for all passenger cars and light trucks.

For a decade LASCO SUPER BLOX have been recognized by loggers and transportation companies as by far the BEST BUY. Why? Because they SAVE MONEY on a tough job.

LASCO brake engineers, the finest in the world, have also the world's unsurpassed laboratory and testing ground, the Western Cascade, Sierra and Rocky Mountain Roads. LASCO engineers strive to make the BEST brake material in the world—not the biggest quantity.

And here is good news for you. LASCO PRICES HAVE BEEN REDUCED, so why buy run-of-the-mill materials when you can get LASCO SUPER BLOX at no extra cost?

QUALITY · SERVICE · Laher · SINCE 1908

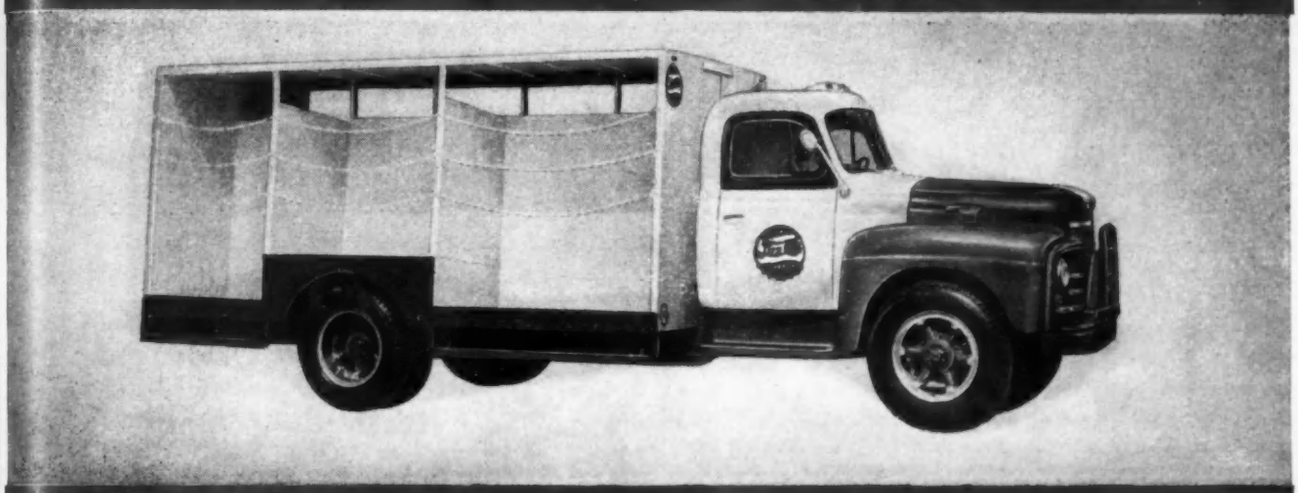
LASCO BRAKE PRODUCTS CORP., LTD.

St. Louis	Oakland	Pittsburgh	Memphis	Kansas City	Los Angeles
2131 Locust St.	2615 Magnolia St.	4024 Liberty Ave	300 Madison Ave.	1630 McGee St.	807 E. 8th St
FORT WORTH	**SAN FRANCISCO**	**SALT LAKE CITY**	**SEATTLE**	**PORTLAND**	**SPOKANE**	**SACRAMENTO**
910 Florence St.	98 - 12th St.	541 So. State St.	714 E Pike St.	N W. 15th & Davis	1319 W Second Ave.	1217 - 16th St.

LAHER INDUSTRIES

LAHER TIRE & RUBBER CO., INC. • LAHER BATTERY PRODUCTION CORP. • LAHER SPRING & TIRE CORP. • LASCO BRAKE PRODUCTS CORP., LTD.

Dulux® Enamel keeps "Pepsi" Trucks



. . . peppy-looking in heavy Philly traffic

The Yellow Rental Company rents trucks to independent concerns in the Philadelphia area—more than 100 to the local Pepsi-Cola bottling plant alone. On the average, Yellow Rental trucks cover more than five and a half million miles a year. Keeping trucks ready to roll on a schedule as heavy as this calls for a really durable finish. That's why Yellow Rental switched to Du Pont DULUX Enamel fourteen years ago and has been using it ever since.

Charles Ponti, Superintendent of Maintenance, has learned from experience that durable DULUX takes hard knocks and rough weather without cracking, chipping, or peeling . . . resists the corrosion that cuts the service life of trucks. Snappy DULUX colors resist fading . . . sparkle like new after every washing, too!

So take a tip from the Yellow Rental Company. Keep your fleet looking its best always in all ways. Specify DULUX for *your* maintenance painting.

E. I. du Pont de Nemours & Co. (Inc.),
Finishes Division, Wilmington 98, Delaware

CHARLES PONTI, Superintendent of Maintenance for the Yellow Rental Company of Philadelphia, likes the way DULUX keeps jobs moving faster on tight painting schedules.

RALPH PORSIA, Body Shop Foreman, likes the way rugged DULUX sprays on smooth . . . gives amazing hiding . . . dries quickly to a hard, glossy finish without rubbing. Durable DULUX gets his trucks out of the shop and on the road fast.

DU PONT **DULUX**® **enamel**

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

B.F.Goodrich

Traction Express tires roll 114,000 miles for food processor

TRACTION EXPRESS TIRES give more original mileage than a regular tire plus a recap, users report. Open spaces in the tread and shoulders prevent heat build-up. Square-cut shoulders and angled grooves defy slippage.

GREAT WESTERN FOODS is a food processing company in Fort Worth, Texas. Its trucks deliver canned products to wholesale grocers throughout the southwest, travel a million miles a year on B. F. Goodrich tires.

Recently the company tried a set of new BFG Traction Express tires — made especially for drive-wheel use. All of these Traction Express tires have rolled over 114,000 miles on the original tread and are still going strong! (Driver S. P. Allen examines one above.)

And truckers all over the country report similar mileages, call the B. F. Goodrich Traction Express the 100,000-mile tire. One reason for these outstanding records is the all-nylon Traction Express cord body.

Nylon is stronger than ordinary cord materials. It withstands double the impact, resists heat blowouts and flex breaks. The rugged Traction Express body outwears even its extra-thick tread — up to 46% thicker than that of regular tires — *and can still be recapped over and over!*

This B. F. Goodrich tire is molded with the beads close together. When mounted, air pressure spreads the beads to full rim width. The sidewalls act as levers, compressing the tread. A compressed tread resists abrasion, adds mileage.

The all-nylon Traction Express more than repays its slight extra cost with bonus miles of service. (Rayon construction at lower prices.) See your B. F. Goodrich retailer. The address is listed under Tires in the Yellow Pages of your phone book. Or write *The B. F. Goodrich Company, Tire & Equipment Div., Akron 18, Ohio.*

Specify B. F. Goodrich tires when ordering new trucks

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

Chrome Top Compression Ring

—another reason why

Sealed Power KromeX

Piston Ring Sets deliver the world's best

ALL-AROUND PERFORMANCE FOR THE MOST MILES!

25 MAJOR ENGINE BUILDERS use Sealed Power chrome top rings!

Factory seating prepares Sealed Power KromeX Sets for quick break-in, with immediate oil control. No long, oil-wasting wait while they seat themselves. The chrome top compression ring in every Sealed Power KromeX Set is factory-lapped to a light-tight finish. It settles down and makes itself right at home in the cylinder from the word "go." That has been thoroughly proved through millions of road-miles of actual use. Other important factors in the amazing performance of Sealed Power KromeX Sets include chrome-faced rails on the MD-50 Steel Oil Ring, and the world-famous FULL-FLOW SPRING. No other piston ring set duplicates Sealed Power KromeX results!

SEALED POWER CORPORATION, MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST IN NEW TRUCKS! BEST IN OLD TRUCKS!

Sealed Power Motor Parts—The Heart of the Engine • Rings, Pistons, Pins, Sleeves, Valves, Water Pumps

They keep your "down-time" down

With Genuine Ford Parts your fleet is in for repairs less often . . . out on the road again faster

It's good business to standardize on Genuine Ford Parts for your fleet. Mechanics like them because they're easy to put in. And you'll like them because they save costly installation time—put your units back in service quicker. They're made to Ford's rigid engineering specifications set by the same men who built your Fords. Then, too, Genuine Ford Parts are track-tested under gruelling conditions before being approved for manufacture. That's why you can be sure they're built to take it—whatever your job is. Easy to get! They're stocked by 6,400 Ford Dealers and thousands of independent garages Coast to Coast. And remember that they keep costs down because they're made right—to fit right—to last longer.

GENUINE Ford PARTS

Two Ford time-and-money-savers

Ford oil filter cartridges are made to remove dust, carbon, metal particles and other engine contaminants quickly and thoroughly—yet oil flows freely and useful additives are retained.

Ford Batteries are cycled from full charge to discharge hundreds of times to provide dependable long life. Also, each battery carries a liberal warranty.

Keep your fleet on its feet

"Low Maintenance Led Us To Standardize On Clark Fork Trucks"

SAYS DAVID MacGREGOR, WORKS MANAGER, EDWARD VALVES, INC., EAST CHICAGO, INDIANA —SUBSIDIARY OF ROCKWELL MANUFACTURING CO.

"Our Clark electric 4000-lb. Carloaders have established a low maintenance record so impressive that we decided to standardize on Clarks," says Mr. MacGregor. "We operate nine machines, the first one purchased in '42. They are all the same model—our spare parts inventory is no problem. We get prompt, competent service when we need it—from the Clark dealer or from the factory."

Do you operate fork trucks? . . . or should you?—one, a dozen, a score? Look into the sound economics of Standardizing on Clarks:

- low maintenance—designed and built to require a minimum of attention
- balanced design—all essential features combined with emphasis on stability, ruggedness, safety
- complete line—electrics, gas-powered; a right type and size
- able counsel to help engineer an efficient handling system

Sensible Step 1 toward a solution of your materials handling problem is to consult the Clark dealer—look in the Yellow Pages of your phone book.

Industrial Truck Division
CLARK EQUIPMENT COMPANY
BATTLE CREEK, MICHIGAN

PRODUCTS OF CLARK—TRANSMISSIONS • AXLE HOUSINGS • TRACTOR UNITS FORK TRUCKS and TOWING TRACTORS • ROSS CARRIERS • POWRWORKER HAND TRUCKS • POWER SHOVELS • ELECTRIC STEEL CASTINGS • GEARS and FORGINGS • FRONT and REAR AXLES for TRUCKS and BUSES

CLARK EQUIPMENT

This One Works

An idea so simple you wonder that it wasn't thought of long before: *the split pin.* It's another proof that it's "good business" to do business with Clark

CLAR
EQUIPME

CLARK EQUIPMENT COMPANY • BUCHANAN • Battle Creek, Benton Harbor and Jackson, Mich

Photographs of Sexton trucks courtesy of General Body Co., Chicago, Illinois

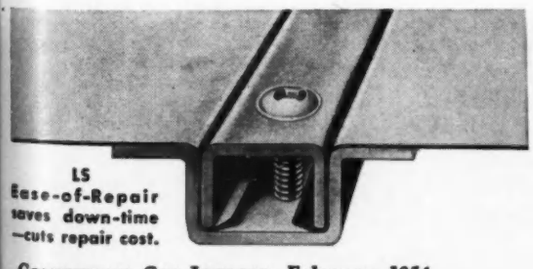
"We've used Lindsay Structure truck bodies for the past ten years" *says* F. P. LUZZO,

transportation manager John Sexton & Co., Chicago, Illinois

John Sexton & Co., Chicago, is another fleet that knows from experience Lindsay Structure truck bodies pay off in dependable, low-cost operation.

"We have used Lindsay Structure truck bodies for the past ten years and have found them very practical as well as very serviceable units," says Frank P. Luzzo, Sexton's transportation manager. "We consider ease-of-repair an important LS feature, as damaged panels can be replaced with a minimum of time lost and at a very low replacement cost."

Find out for yourself the many money-saving reasons why more and more of the nation's leading fleet operators specify Lindsay Structure bodies for their trucks. Get in touch with your nearby LS Body Builder or write today for a copy of the LS Truck body folder—



LS Ease-of-Repair saves down-time —cuts repair cost.

LINDSAY LS STRUCTURE

Lindsay Structure, Inc.
5000 West Dempster St., Skokie, Illinois

U. S. Patents 2017629, 2263510, 2263511
U. S. and Foreign Patents and Patents Pending

Budd Wheel Distributors

AKRON—Motor Rim Manufacturers Co.
ALBANY—Wheels, Incorporated
ALBUQUERQUE—Wheels & Brakes, Inc.
ATLANTA—Harris Automotive Service, Inc.
BALTIMORE—R. W. Norris & Sons, Inc.
BIRMINGHAM—Wheel, Rim & Parts Co.
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CHARLOTTE—Carolina Rim & Wheel Co.
CHICAGO—Stone Wheel, Inc.
CINCINNATI—Rim & Wheel Service, Inc.
CLEVELAND—Motor Rim Manufacturers Co.
COLUMBUS—Hayes Wheel & Spring Service
DALLAS—Southwest Wheel, Inc.
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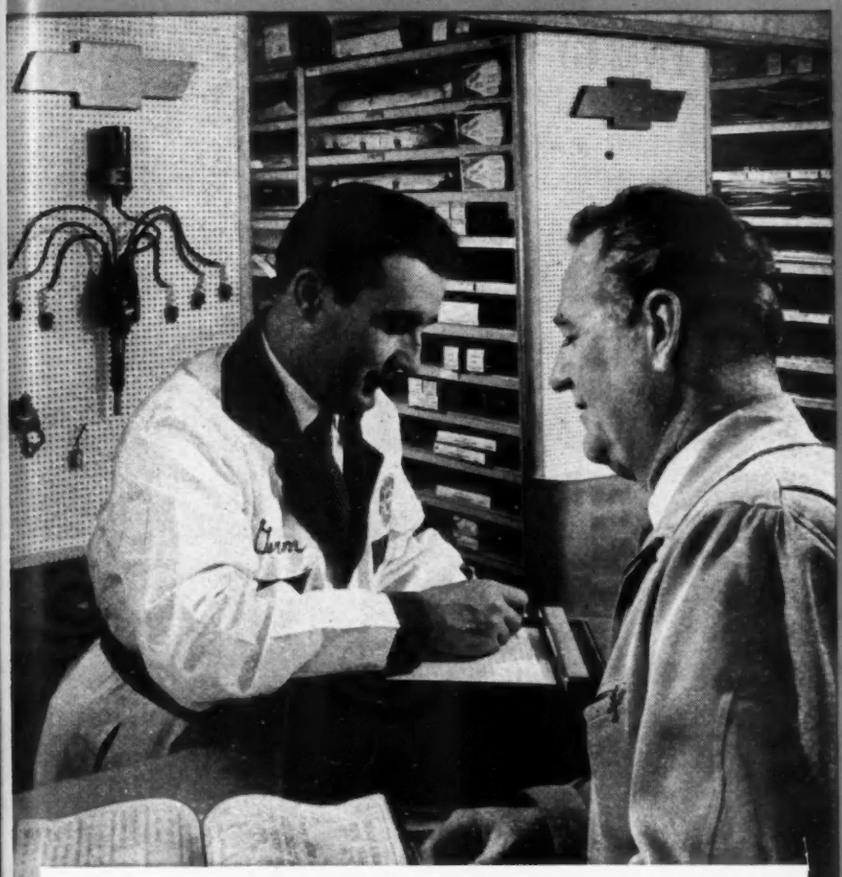
DAYTON—Rim & Wheel Service, Inc.
DENVER—Quinn & McGill Motor Supply Co.
DES MOINES—Des Moines Wheel & Rim Co.
DETROIT—H. & H. Wheel Service, Inc.
EVANSVILLE—Auto Wheel & Rim Service Co., Inc.
FARGO—Wheel Service Company
FORT WAYNE—Wheel & Rim Sales Co.
GRAND RAPIDS—Rim & Wheel Service Co.
HARRISBURG—Standard Wheel & Rim Co.
HARTFORD—Connecticut Wheel & Rim Co.
HOUSTON—Southwest Wheel & Equipment Co.
INDIANAPOLIS—Indiana Wheel & Rim Co.
JACKSONVILLE—Southeast Wheel & Rim Co.
KANSAS CITY—Borbein, Young & Co.
KNOXVILLE—Harris Automotive Service, Inc.

FLEET OWNERS:



Here's 1 of the 4 Big Benefits you get

when you deal with YOUR CHEVROLET DEALER ... YOUR PARTNER IN SERVICE

A complete line of GENUINE CHEVROLET PARTS

One quick, convenient source supplies the parts you need—and they're the right parts to do the job right.

Here are the other 3 ➡

Reduced Maintenance Time and Costs

You get the parts you want in a hurry. What's more, Genuine Chevrolet Parts fit right . . . save you time and money on fleet maintenance.

More Dependable Truck Operation

Your fleet service work is more reliable when you use Genuine Chevrolet Parts for replacement. They function better . . . last longer.

Technical Helps in Solving Service Problems

Helps like the "Time Saver" shown here enable you to solve tough service problems quickly and accurately. You do jobs *right—right away!*

CHEVROLET

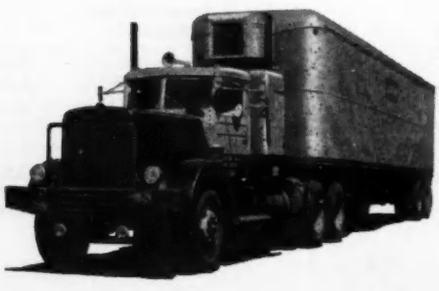
More than 1 out of 4 vehicles on the road is a Chevrolet! It's the largest owner service market in the industry! By dealing with your Chevrolet dealer, you can take full advantage of the wide reputation for customer satisfaction that has been built by Genuine Chevrolet Parts.

For better, faster, surer fleet service . . . be sure to deal with your Chevrolet dealer!

Stretches mileage betwee

They master mountains! Mastering mountains is everyday work for the fleet of diesel units operated out of Denver by Armour and Company. Despite punishing service, these units are getting excellent mileage between overhauls with the help of STANOLUBE HD-M Motor Oil.

Help fleet keep its bearings! Mr. Herman Heinze (left), fleet supe intendent for Armour and Company at Denver, and Mr. Gordon Jam of Standard Oil, note how effective lubrication has kept diesel engine line and bearings in good condition despite 157,000 tough miles of operation.



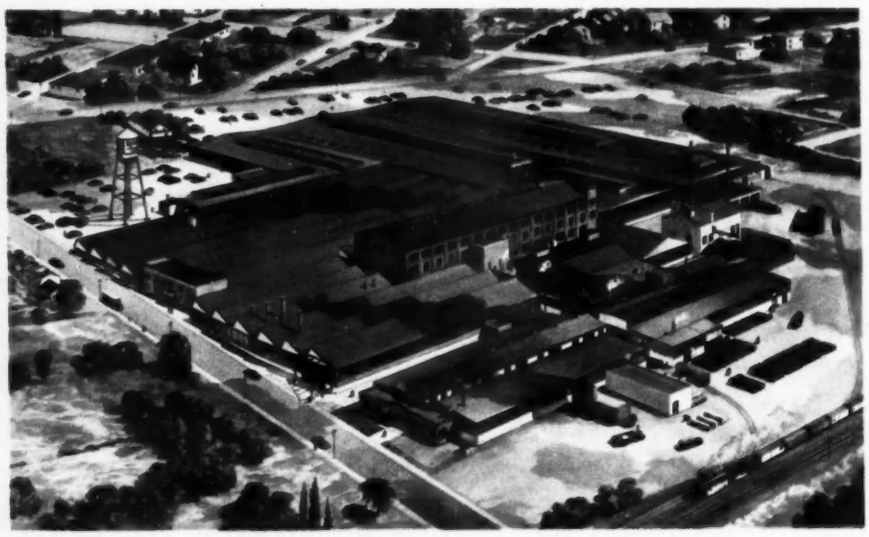
STANDARD

Spicer has grown up with "the family"

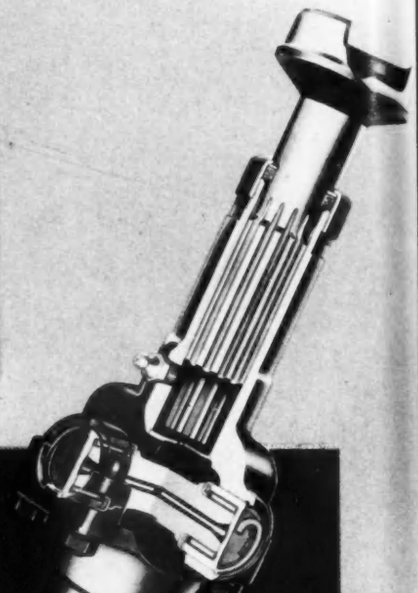
The Spicer organization and the automotive industry were boys in knee pants together. They played in the same yard . . . went to the same school . . . faced the same problems of life together. Spicer has grown up with the automotive industry in every phase of its development.

Spicer products have been an integral part of most American automobiles since 1904. The designing and manufacturing skill gained from producing millions and millions of Spicer units is used by a majority of the manufacturers in the passenger car, truck, bus and tractor fields.

THIS IS SPICER IN POTTSTOWN, PENNSYLVANIA



Facilities of the Pottstown plant are devoted to the high production requirements of Spicer Universal Joints and Propeller Shafts in the smaller sizes, for use in passenger cars, light and medium size trucks, and industrial applications



The unique and original design of Spicer Universal Joints has made them the *Standard of the Industry*

Sliding splines have ground finish on ALL contact surfaces, and have extra hardness and iron manganese phosphate coating.

True bearing alignment with rigid one-piece yoke design. This rigidity is the essence of accuracy.

Precision bearings with improved surface hardness and finish.

Dynamically balanced to minimize vibration.

Uniform high quality propeller shaft tubing. Steel made to our exacting specifications.

Wide selection of flange and yoke types and sizes to suit each individual requirement.

SPICER MANUFACTURING DIVISION of Dana Corporation • Toledo 1, Ohio

50 YEARS OF Spicer SERVICE

ENGINEERING DANA MANUFACTURING

TRANSMISSIONS • UNIVERSAL JOINTS • PROPELLER SHAFTS • BROWN-LIPE and AUBURN CLUTCHES • FORGINGS • AXLES • STAMPINGS • SPICER BROWN-LIPE GEAR BOXES • PARISH FRAMES • TORQUE CONVERTERS • POWER TAKE-OFFS • POWER TAKE-OFF JOINTS • RAIL CAR DRIVES • RAILWAY GENERATOR DRIVES • AIRCRAFT GEARS • WELDED TUBING

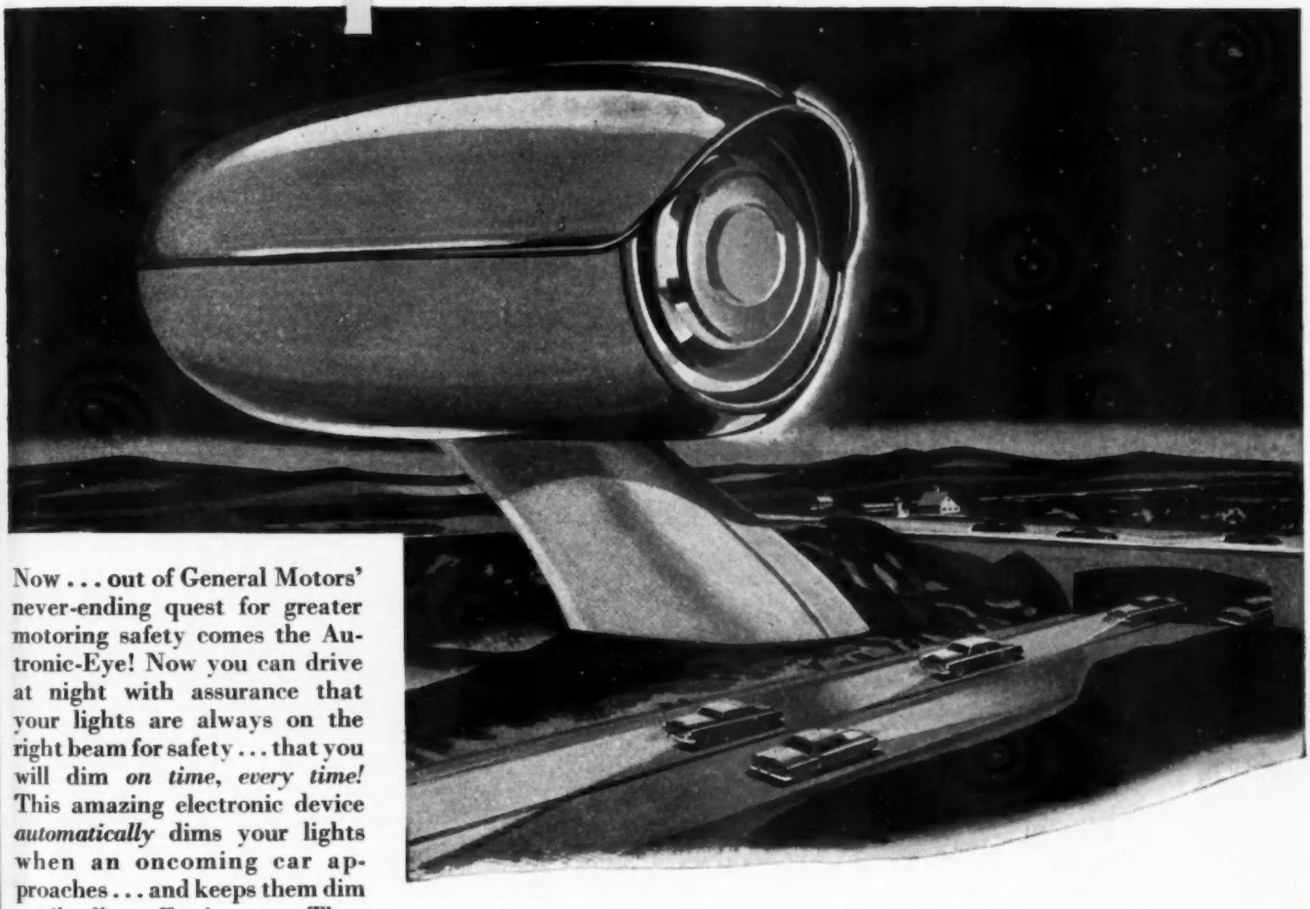
ANOTHER

GM ENGINEERING

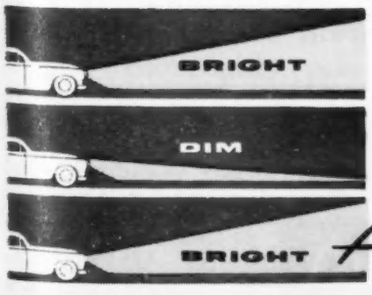
FIRST

AUTRONIC-EYE®

AUTOMATIC HEADLIGHT CONTROL



Now . . . out of General Motors' never-ending quest for greater motoring safety comes the Autronic-Eye! Now you can drive at night with assurance that your lights are always on the right beam for safety . . . that you will dim *on time, every time!* This amazing electronic device *automatically* dims your lights when an oncoming car approaches . . . and keeps them dim until all traffic is past. Then back to bright—*automatically!* See how much safer and easier night driving can be. Ask your Chevrolet, Pontiac, Oldsmobile or Cadillac dealer for an Autronic-Eye demonstration today!



BIGGEST ADVANCE IN NIGHT DRIVING SAFETY IN 30 YEARS!

Automatically AT NIGHT!

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GUIDE LAMP DIVISION • GENERAL MOTORS CORPORATION • ANDERSON, INDIANA

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Gulf Oil Corporation—Gulf Refining Company
1822 Gulf Building, Pittsburgh 19, Pa.

Please send me without obligation, copies of your pamphlets, "Gulflube Motor Oil X.H.D.," and "Gulf Motor Flush."

Name _____

Company _____

Title _____

Address _____

SPEAKING OF HORSEPOWER...

. . . whether you need TWO or A THOUSAND, there's a Continental Red Seal model Engineered and Built for Your Job

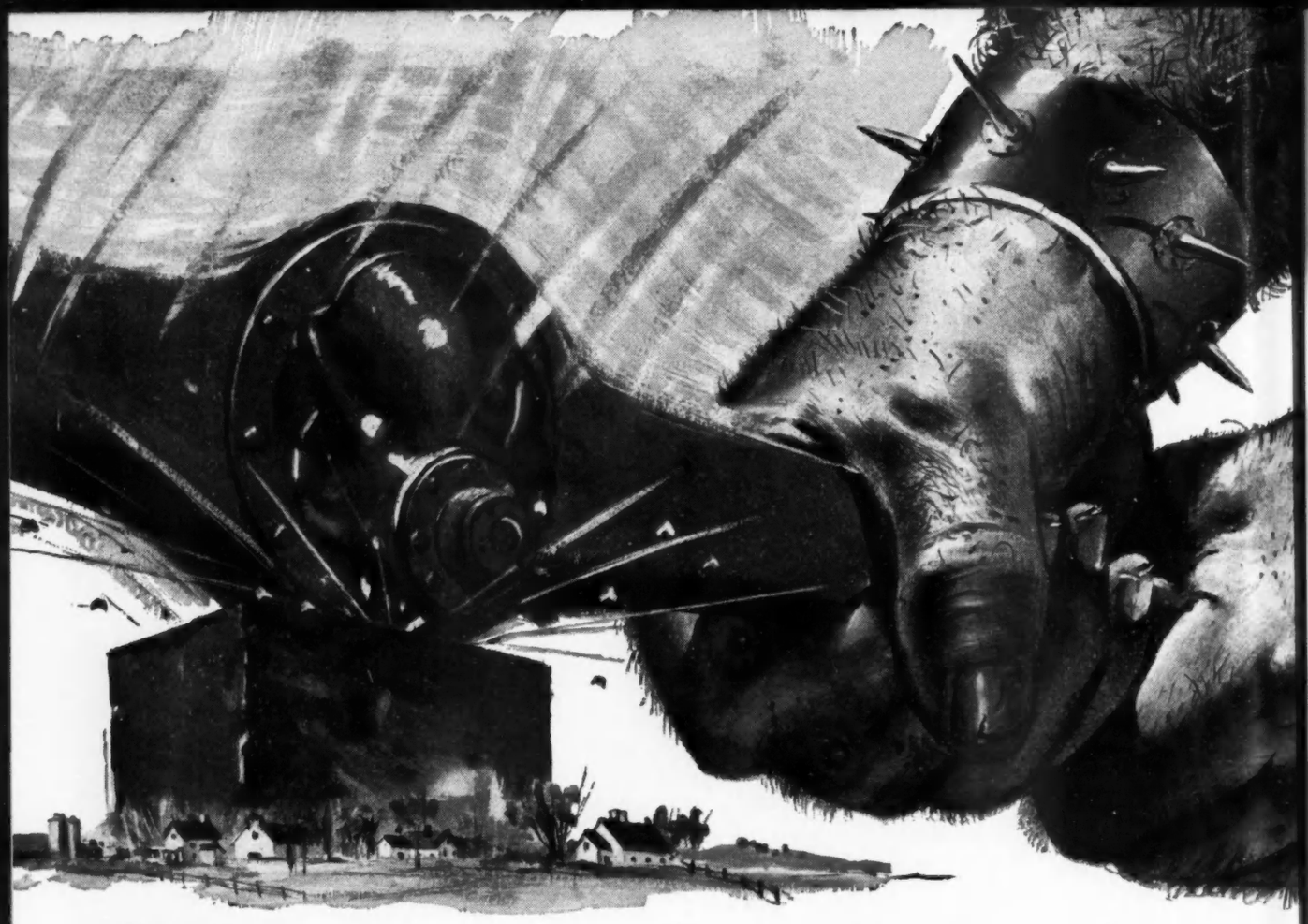
Now that the military models developed jointly with Army Ordnance are available for civilian uses, you can get Continental power for commercial applications at just about every power level from a lawnmower up to a tank. These air-cooled military series, from 375 to more than 1,000 horsepower, have been thoroughly proven under combat conditions. Their performance has been such as to forecast their adoption for many civilian jobs, especially those requiring high power-to-weight ratio, ease of maintenance, and stamina for sustained peak loads. If your needs fall between 2 and 1,040 horsepower, you'll fill them *best* with the Continental Red Seal engineered and built to your job.

1819 BROADWAY, NEW YORK 23, N. Y. • 6218 CEDAR SPRINGS RD., DALLAS 9, TEX. • 910 S. BOSTON ST., TULSA, OKLA.

PARTS AND SERVICE COAST TO COAST

1252 OAKLEIGH DRIVE, EAST POINT (ATLANTA) GA. • 3817 SOUTH SANTA FE AVENUE, LOS ANGELES 58, CALIFORNIA.

Continental Motors Corporation
MUSKEGON • MICHIGAN



We give truck axles a bruta

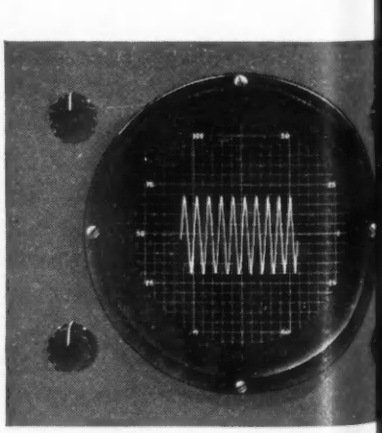
in the new Timken-Detroit indoor proving ground . . . and onl

We torture them . . . shock-load, over-speed and jerk them . . . twist, strain and abuse them. We match every on-the-job hauling condition . . . then throw in a few devilish tricks of our own!

The result? You know for sure that *any* Timken-Detroit axle can take more abuse on the job it was built for than any other axle made!

To prove it, we moved a huge proving ground indoors. In one room we can simulate any hauling situation—our engineers can apply 50 years of experience to perfecting axles for modern trucks, buses and trailers, and measure performance with scientific precision.

This research pays off in longer truck life; less maintenance, repairs and downtime; lower operating costs. No wonder Timken-Detroit axles with Hypoid gearing rate "first" with wise truck owners!



Whatever you haul . . . simulated service conditions show up electronically on a screen like this. For instance—a heavily loaded truck on a bumpy, twisting road—then on a level express highway or long grade. What happens to the axle and gearing is measured, charted with absolute scientific accuracy.

TDA proves axle quality and performance in this "Torture Chamber"

Here we simulate actual highway conditions . . . test quality and performance of axles under any hauling situation, such as duplicating the kinetic energy of 80,000 lbs., G.C.W., at 60 m.p.h. All tests are repeated hour after hour with an automatic cycling control.

Here's the inside story on why

YOU GET MORE MILES
MORE RECAPS
WITH ARMSTRONGS!

Exclusive Double Insert Plies Protect Vital Section Under Tread From Impact Breaks, Blisters, Separation!

No wonder Armstrong Truck Tires give you extra wear, mileage, recappability! For *only* Armstrongs contain 2 special insert plies *in addition* to a breaker strip! This extra strength helps hold the carcass tight – halts tire growth – eliminates mileage-consuming "stretch." And, by guarding against heat and impact breaks, it makes Armstrongs up to *71% more recappable*, as proved by tests!

You Pay NOTHING EXTRA for ARMSTRONG'S EXTRA QUALITY

HERE'S PROOF OF ARMSTRONG'S EXTRA STRENGTH!

Comparison of 900 x 20 10-Ply Highway Tires of First Line Quality

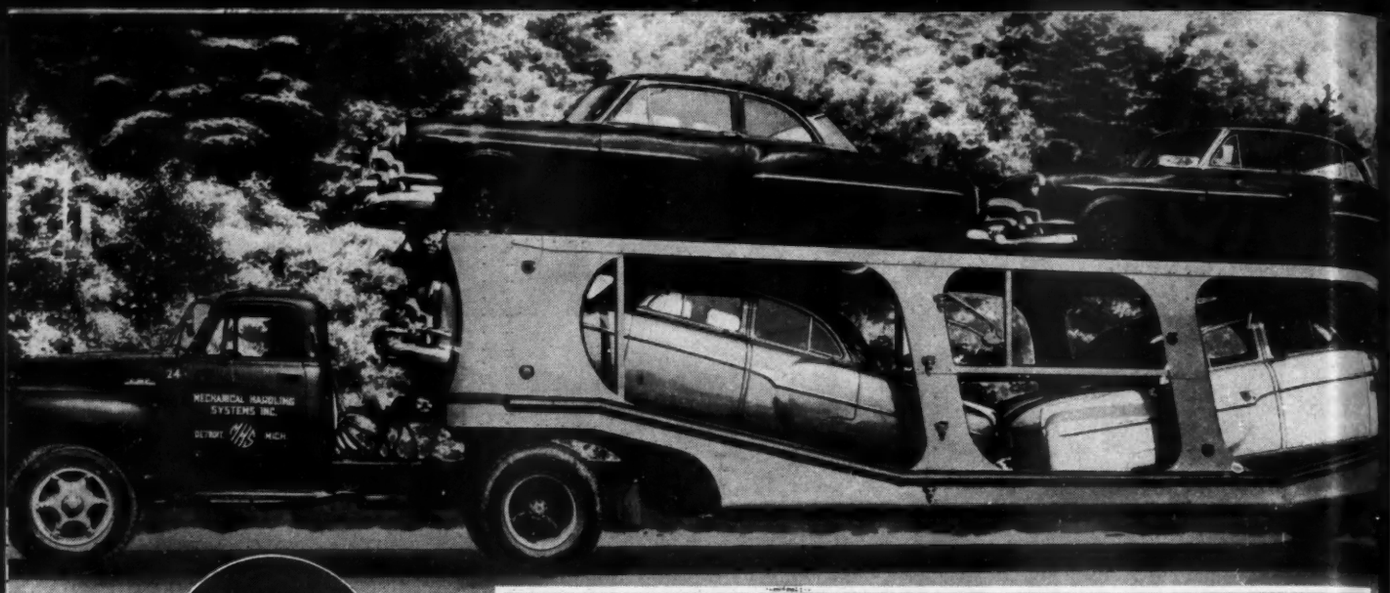
	Armstrong	Brand "A"	Brand "B"	Brand "C"	Brand "D"
Total Carcass Strength	6,270 lbs.	5,297	5,384	5,189	5,247
% Rating	100%	84.5%	86%	83%	83.7%

Source: Independent Research Agency

ARMSTRONG TRUCK TIRES

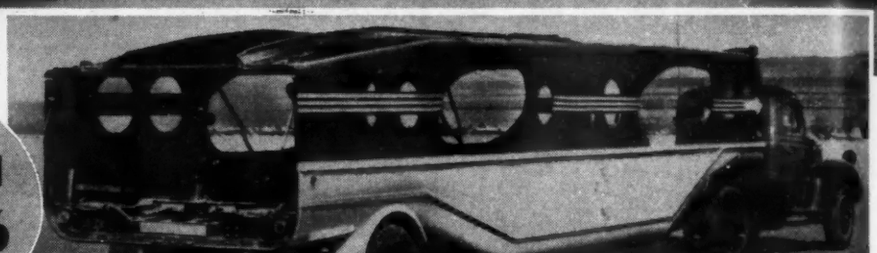
Rhino-Flex

WEST HAVEN, CONN. NORWALK, CONN. NATCHEZ, MISS. DES MOINES, IOWA



IN 1954

AS IN 1946



USS High Strength steel construction pays o

in *lighter, more efficient equipment*

FOLLOWING World War II, Mechanical Handling Systems, Inc., Detroit, Michigan, decided to reduce the weight of their 35-foot model auto-carrying trailer as part of a campaign to develop lighter, more economical-to-operate equipment and, at the same time, save vital steel.

This was accomplished by re-designing the body structure to eliminate unnecessary steel, and by using easily-fabricated USS COR-TEN and USS MAN-TEN steels in thinner sections throughout. Over-all weight of the trailer body was reduced one ton, from 6,485 pounds to 4,485—yet the trailer was just as strong as before.

At that time the manufacturer said: "Because the cargo load carried by these trailers is constant, the saving in vehicle weight cannot be used for increased payload. But it does pay off in the economies obtained in extra tractor life, reduced oil and gas consumption, in longer tire and brake wear. This trailer has performed extremely well under constant service."

So pleased were Mechanical Handling Systems, Inc., with their first High Strength steel trailers that today they are still building trailers to very similar designs using COR-TEN and MAN-TEN steels. But let them tell you in their own words: "Models have been changed, but generally just in respect to dimensional changes. The current model appears very similar to the earlier models. Since the product in its original form was compared on the basis of weight saving and the application proven, we cannot contribute additional information now." In other words, COR-TEN and MAN-TEN steel construction has proved so effective that they feel they can't improve on it.

Why not find out how you can adapt the advantages of USS High Strength steel construction to your equipment? By the use of proper design plus COR-TEN and MAN-TEN steels your trailers can be built stronger, bigger or lighter as your needs require, and the slight additional cost will, in a short time, be more than offset by the increased revenue or the decreased operating costs of your equipment. Write or call the nearest District Sales Office of United States Steel for more information.

UNITED STATES STEEL CORPORATION, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
NATIONAL TUBE DIVISION, PITTSBURGH • TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

USS High Strength STEELS

USS

4-223

UNITED STATES STEEL

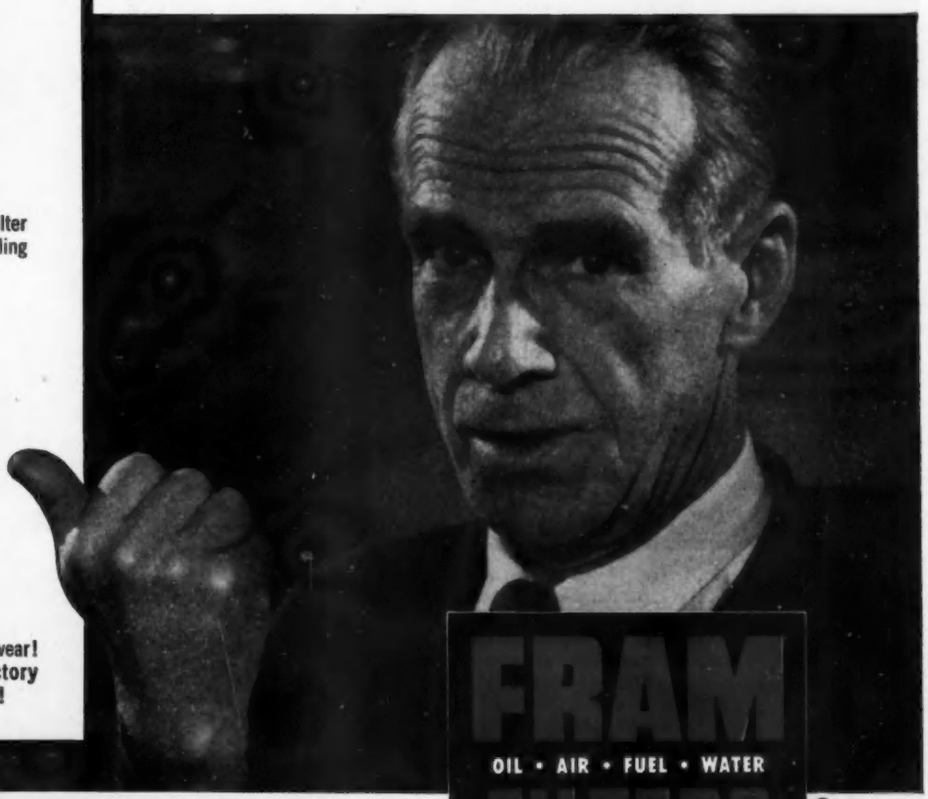
FRAM BEST FOR ANY FLEET

cuts operating costs, maintenance, repairs!

Keep your fleet out of the shop and on the road with FRAM—guaranteed your best bet for longer service at less cost per mile!

FRAM Radiator & Water Filter stops overheating . . . ends cooling system troubles!

FRAM Cartridges cut engine wear! Custom-engineered to factory standards for all your engines!



FRAM OIL • AIR • FUEL • WATER FILTERS®

FRAM CORPORATION, Providence 16, R. I.
Fram Canada Ltd., Stratford, Ont.

Now...get all the advantages of

Quick Clutch

Every Lipe Factory Exchange Unit is built of the same quality materials — to the same precise tolerances—tested to the same exacting specifications—as a new clutch. As such it carries Lipe's Seal of Protection—your guarantee of *genuine* Lipe parts and craftsmanship.

Replacement with Lipe FACTORY EXCHANGE UNITS

Cuts costs 4 ways

1 Cuts **DOWNTIME** No long lay-ups for clutch repairs — trucks are out of the shop and on the road faster.

2 Cuts **LABOR** No costly time spent on clutch disassembly, inspection, parts replacement, assembly and testing.

3 Cuts **TOOL INVESTMENT** No expensive clutch rebuilding equipment to buy — none to maintain.

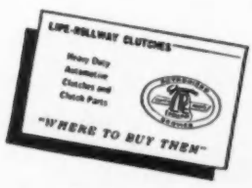
4 Cuts **TRUCK DEPRECIATION** No chance of an unbalanced clutch causing excessive vibration, wear and tear of vital gears, drive shaft and bearings.

Lipe's Factory Exchange Plan Makes Dollars and Sense

Next time you need a clutch repair job, install a Lipe Factory Exchange Unit instead. Then check your savings in overhead alone. Conservative estimates show that you should *reduce your clutch repair bills up to 25%!*

That's a hefty saving no matter how large or small your fleet is. See for yourself. Next time order a Factory Exchange Unit from your authorized Lipe distributor.

Authorized Lipe Service Stations are located from coast to coast. For quick service on genuine Lipe parts and exchange units, look for this ad in the classified section of telephone directories in principal cities.

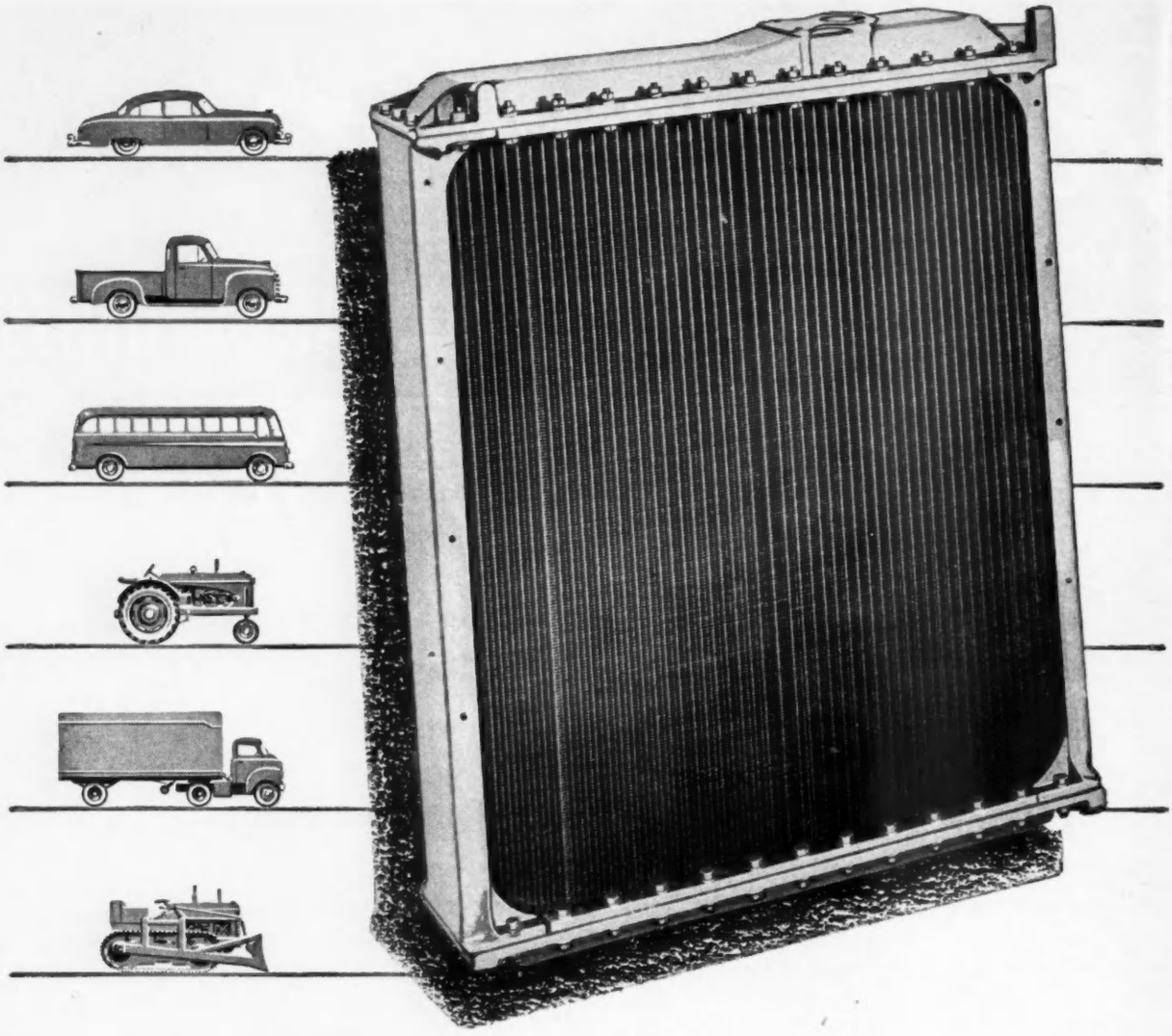


LIPE ROLLWAY

Lipe - ROLLWAY CORPORATION

Manufacturers of Automotive Clutches and Machine Tools

Syracuse 1, N. Y.



Protect Fine Engine Performance With . . .

"balanced cooling"

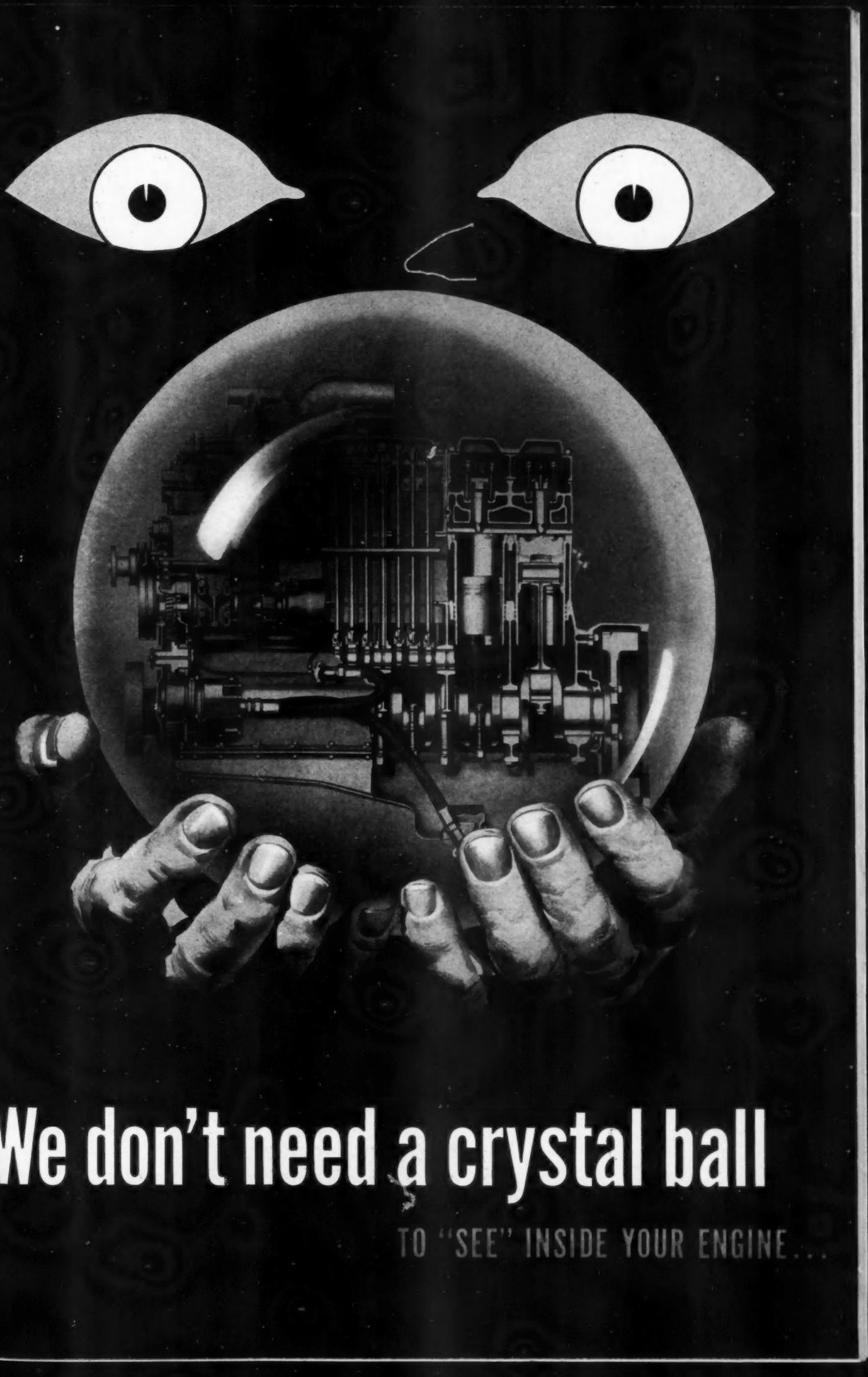
Too little or too much heat prevent an engine from giving peak performance. "Balanced cooling" protects and prolongs fine performance. For over 50 years, as specialists in radiator manufacture, we have been providing efficient "balanced cooling" systems for car, truck, bus, tractor, stationary and diesel engines. This lifetime of experience assures you unparalleled engineering design and production skill, and the widest range of radiator sizes and capacities.

LONG MANUFACTURING DIVISION, BORG-WARNER CORP. • DETROIT, MICH. and WINDSOR, ONT.

LONG

CLUTCHES • RADIATORS • TORQUE CONVERTERS
OIL COOLERS

ENGINEERING BW PRODUCTION



ractor,
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ebruary, 1954

Crystal Lake has no crystal ball, but . . .

Just give us a pint of your used oil!

and we'll tell you...

1 what may be wrong...
2 what causes it...
3 what to do about it.

You will be amazed at the information the scientists in our multi-million dollar laboratories can squeeze out of a pint of your used oil.

This information can be extremely valuable to you. By revealing what's going on inside your engine, it can help you increase engine efficiency and cut operating costs. By anticipating serious trouble, it can often save you big repair bills. Valuable to diesel operators, too.

ONE OF MANY SERVICES

This is one of the many services regularly enjoyed by Pure Oil commercial customers. Fleet services include special lubrication charts designed specifically for your equipment . . . and practical, easy-to-use service records for improving maintenance efficiency.

Try it without obligation—If you're not presently a Pure Oil customer, let us give you a free Pure-sure Analysis so you can see for yourself the value of PURE'S service. See your PURE Representative, or write Dept. CCJ-42, The Pure Oil Company, 35 East Wacker Drive, Chicago 1, Illinois. (Offer limited to Pure Oil's 24-state marketing area.)

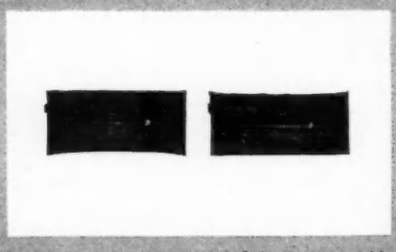
We'll answer questio like these:

- ★ Is your engine using too mu.h oil fuel? If so, why?
- ★ Should you change oil more freque . . . or less frequently?
- ★ Is efficiency hampered by sludge varnish deposits?
- ★ Are there leaks in the cooling syst
- ★ Is the oil filter working right?
- ★ Are you due for serious trouble, s as failure of rings, pistons or bearin

Pure-sure Analysis foresees trouble like this:

This piston failure was due to excessive corrosion, caused by low temperature operation.

This piston was damaged by a broken ring. Notice the large broken-out area. Excessively high temperatures or dirt can cause this type of failure.



Excessive dirt in oil is one of the items quickly detected by PS Analysis. Dirt in oil forms an effective grinding compound to wear away vital moving parts. Timely analysis of a 1-pint sample of oil might have prevented the deep grooving of these damaged bearings, as well as excessive wear of rings and cylinder walls.

THE PURE OIL
PURE
COMPANY, U.S.A.

Be *sure* with Pur

New Chevrolet Trucks for '54

Loaded with brand-new advantages you need and want!

You'll get more work done in less time and at lower cost with new '54 Chevrolet trucks on the job. They bring you more new features . . . more big new advantages than any other truck on the road.

For example, you get new engine power in all models. The advanced "Thriftmaster 235" engine combines bigger displacement and higher compression with other new features to give you greater power and finer performance. The rugged "Loadmaster 235" engine offers increased strength and stamina for heavier trucking operations. The all-new "Jobmaster 261" engine* brings you extra reserves of high-compression power for hauling big loads on schedule.

In addition, you enjoy new and even greater operating economy. All three 1954 Chevrolet truck engines bring you the full benefit of thrifty high-compression power.

And there are many, many more new things you'll like about these great new Chevrolet trucks. New, roomier pickup and stake bodies let you haul more . . . save you time and extra trips. And they're set lower to the ground for easier loading and unloading. New truck Hydra-Matic transmission* lets you drive all day without shifting. It's offered not only on ½- and ¾-ton Chevrolet trucks, but on 1-ton models, too. New Comfortmaster cab with one-piece curved windshield and amazing new Ride Control Seat* offers the last word in comfort, convenience and safety.

Plan now to see your Chevrolet dealer and get all the facts about the new Chevrolet trucks for '54. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

Most trustworthy trucks on any job!

CHEVROLET

ADVANCE-DESIGN TRUCKS

CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

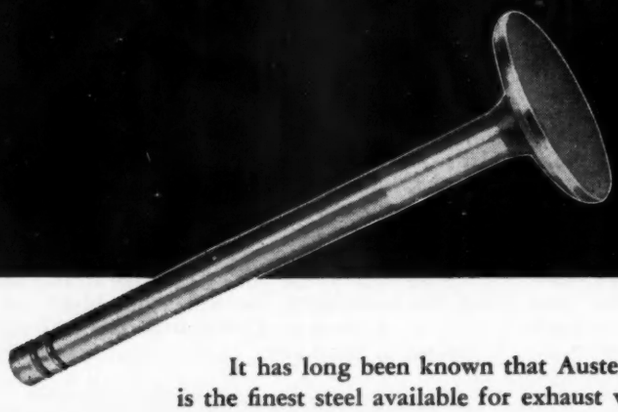
THREE GREAT ENGINES—The new "Jobmaster 261" engine* for extra heavy hauling. The "Thriftmaster 235" or "Loadmaster 235" for light-, medium- and heavy-duty hauling. **NEW TRUCK HYDRA-MATIC TRANSMISSION***—offered on ½-, ¾- and 1-ton models. Heavy-Duty **SYNCHRO-MESH TRANSMISSION**—for fast, smooth shifting. **DIAPHRAGM SPRING CLUTCH**—improved-action engagement. **HYPOID REAR AXLE**—for longer life on all models. **TORQUE-ACTION BRAKES**—on all wheels on light- and medium-duty models. **TWIN-ACTION REAR WHEEL BRAKES**—on heavy-duty models. **DUAL-SHOE PARKING BRAKE**—greater holding ability on heavy-duty models. **NEW RIDE CONTROL SEAT*** eliminates backrubbing. **NEW, LARGER UNIT-DESIGNED PICKUP AND PLATFORM STAKE BODIES**—give increased load space. **COMFORTMASTER CAB**—offers greater comfort, convenience and safety. **PANORAMIC WINDSHIELD**—for increased driver vision. **WIDE-BASE WHEELS**—for increased tire mileage. **BALL-GEAR STEERING**—easier, safer handling. **ADVANCE-DESIGN STYLING**—rugged, handsome appearance.

**Optional at extra cost. Ride Control Seat is available on all cab models, "Jobmaster 261" engine on 2-ton models; truck Hydra-Matic transmission on ½-, ¾- and 1-ton models.*

MORE CHEVROLET TRUCKS IN USE THAN ANY OTHER MAKE!

NITROGEN

. . . the element that gives TNT its POWER now gives Permite Valves their STRENGTH



It has long been known that Austenitic steel of the 21-chrome type is the finest steel available for exhaust valve manufacture.

Permite engineers, endlessly testing for products that will better serve the needs of the automotive industry, found that nitrogen added to 21-chrome steel definitely increases the ability of this alloy to resist heat and corrosion. Nitrogen increases the valve's strength at least 25% and its hardness 40% when operating at elevated temperatures.

Permite exhaust valves with nitrogen added are the valves that are used as original equipment by leading car and truck manufacturers. They are preferred by mechanics everywhere. For highest quality, for immediate service, order Permite Original Equipment Parts from your nearby Permite Distributor.

ALUMINUM INDUSTRIES, Inc., Cincinnati 25, Ohio

original equipment

Permite parts

the complete motor and chassis line

exceeds SAE SPECIFICATIONS

Use Delco Super 11 heavy-duty brake fluid for the TOUGH braking jobs!

Delco Super 11 heavy-duty brake fluid exceeds SAE specification 70R1 which establishes performance standards for heavy-duty brake fluid, including operating temperature ranges, stability, lubrication, effect on metals and rubber — to name a few—and also exceeds U.S. Federal specification VV-F-451a.

Delco Super 11 is packaged in any amount convenient for you, from 16-ounce to 54-gallon containers. Place your order with your United Motors distributor today.

A GENERAL MOTORS PRODUCT — A UNITED MOTORS LINE

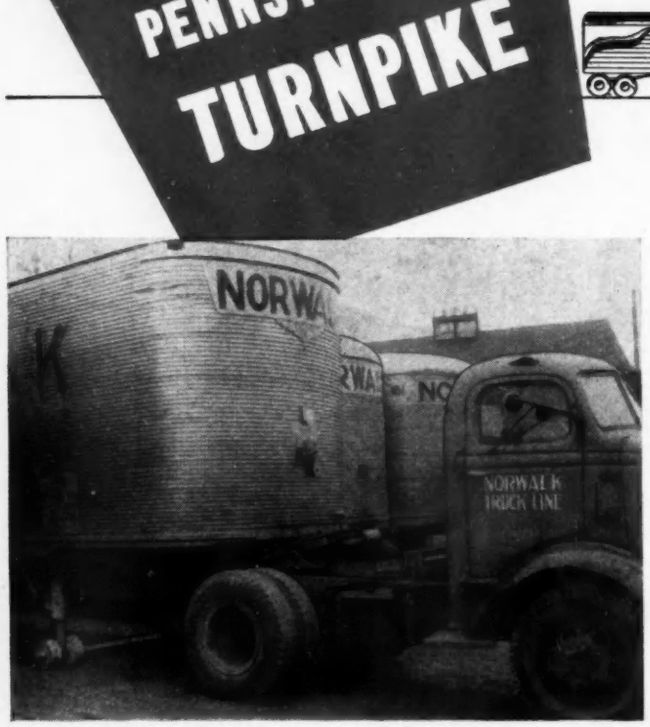
DISTRIBUTED BY WHOLESALERS EVERYWHERE

moraine products

DIVISION OF GENERAL MOTORS CORPORATION, DAYTON, OHIO

IT'S ONE OUT OF THREE!

ON THE PENNSYLVANIA TURNPIKE



By actual count on the Turnpike one out of three cross-country truckers is a user of CEMCO TRAILER JOCKEYS for faster spotting of trailers at terminals.

Scores of truckers have seen the CEMCO light —they're spotting trailers at busy terminals with CEMCO TRAILER JOCKEYS. Some report that one man now does what required two men by the old hand-cranking method. Others describe the CEMCO as "indispensable for economical operation". The CEMCO fits almost any tractor having a minimum dimension of 50" from back of cab to center-line of axle.

THEY KNOW THE VALUE OF CEMCO . . .

Here's what a CEMCO TRAILER JOCKEY offers you—37,500# hydraulic lifting power at center line of fifth wheel. Driver need not leave cab during entire operation by using cab control of king-pin release (either air or vacuum type). Glad to send you names of users near you. Ask them for yourself—don't take our word for it. Complete specifications are yours for the asking.

ASK ANY OF THESE USERS . . . . .

Akers Motor Lines, Inc., *Gastonia, N. C.*
Associated Transport, Inc., *New York*
Davidson Transfer & Storage, *Baltimore*
Garrett Freight Line, Inc., *Pocatello*
Kramer Bros. Frt. Lines, Inc., *Detroit*
Lee Way Motor Freight, Inc., *Oklahoma City*
Mason & Dixon Lines, Inc., *Kingsport, Tenn.*
Navajo Freight Lines, Inc., *Los Angeles*
Norwalk Trucking Company, *Norwalk, Ohio*
Ringsby Trucking Co., Inc., *Denver*
Riss & Company, Inc., *Kansas City*
Roadway Express, Inc., *Akron*
Southern Express, Inc., *Dallas*
Standard Oil Company (Ohio), *Cleveland*
St. Johnsbury Trucking Co., Inc., *Boston*
Trans-American Frt. Lines, Inc., *Detroit*
United Truck Lines, Inc., *Spokane*
U. S. Truck Lines, Inc. of Delaware, *Cleveland*
Western Express Company, *Cleveland*
Winston and Newell Company, *Minneapolis*

CEMCO

A NAME THAT HAS MEANING IN THE TRUCKING INDUSTRY

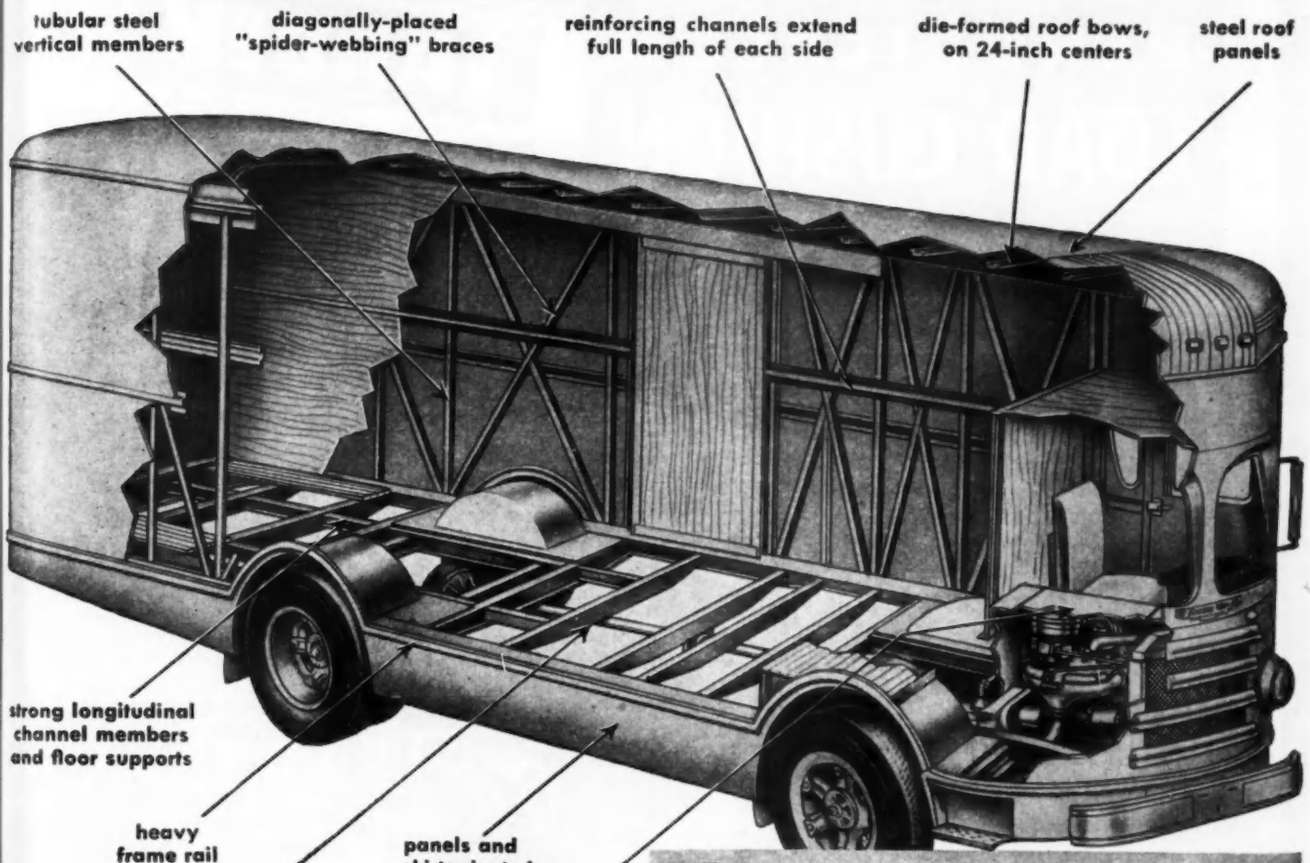
CEMCO INDUSTRIES, INC.
GALION, OHIO

Manufacturers of:

TRAILER JOCKEYS • HYDRAULIC TAILGATES • UNDERBODY HOISTS • SPLIT-SHAFT POWER TAKE-OFFS

INTEGRAL DESIGN

MAKES FAGEOL VANS SAFER AND STRONGER!


tubular steel vertical members
diagonally-placed "spider-webbing" braces
reinforcing channels extend full length of each side
die-formed roof bows, on 24-inch centers
steel roof panels
strong longitudinal channel members and floor supports
heavy frame rail
panels and skirts riveted to body front and sides
die-formed cross members boxed, gusseted and reinforced
sheet steel insulated engine housing

Ability of Fageol Vans to carry MORE PAYLOAD in trucks of shorter over-all length—their greater strength and safety—lies in Fageol integral design and construction.

The entire Van, including the body, is built as one unit. Every upright and cross member is part of the truck itself, thus creating maximum strength and safety in a vehicle which weighs from 700 to 3,500 lbs. less than other trucks. And—because engine and driver's compartment occupy only 4 ft. of the over-all truck length, 200 to 500 cubic ft. MORE space (than in conventional trucks) is available for payload.

A-5006

. . . today's best truck investment—more payload in a truck of shorter over-all length.

INTERNATIONAL HARVESTER

FAGEOL VANS are sold by all International Dealers and Branches

for information write to

INTERNATIONAL HARVESTER MOTOR TRUCK SALES DEPT.

180 NORTH MICHIGAN AVENUE • CHICAGO 1, ILLINOIS

INCREASE YOUR TIRE MILEAGE!

WITH THE

HENDRICKSON TANDEM

FEATURING THE

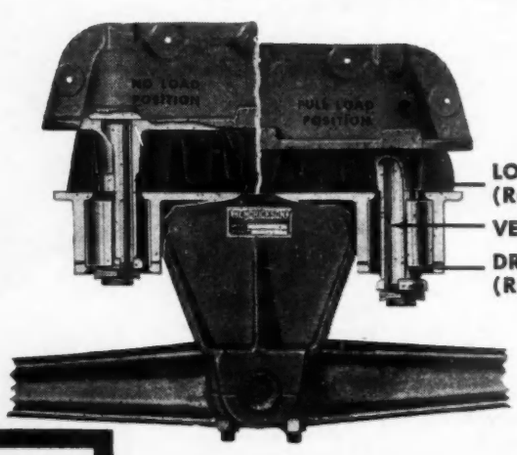
HENDRICKSON LOAD CUSHION

FOR TRAILERS

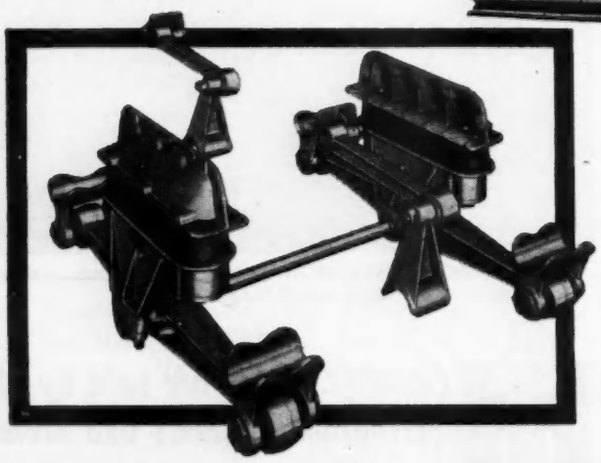
THE RUBBER "LOAD CUSHION" is an innovation in tandem suspension—the rubber replaces the steel leaf spring and is designed to give the ultimate in a *soft, easy ride* during the entire range from empty to full load. Four drive pins encased in rubber bushings absorb starting and braking stresses . . . permit up and down movement in direct relation to the load . . . and maintain positive alignment of the unit.

NOTE!

Empty, the unit rides on the outer edges of the "load cushion"; as the load increases, the cross bars are progressively brought into contact to absorb the additional load.



HENDRICKSON SERIES R TANDEM



Hendrickson Tandem design eliminates the cause of excessive tire wear and assures you a *low cost per tire mile* with

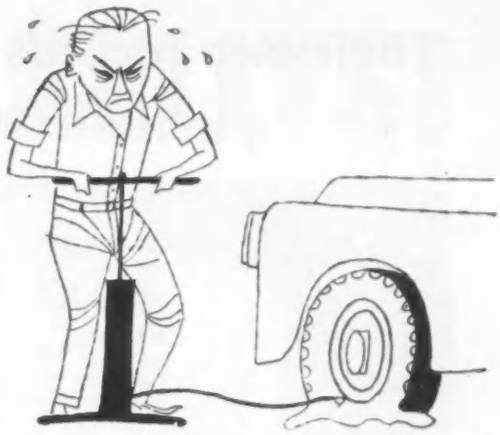
- an easier ride
- compression centering (after turning)
- shock absorbing rubber
- elimination of *load transfer*

NO GREASE POINTS

HENDRICKSON MOTOR TRUCK COMPANY

8001 West 47th Street · Lyons (Chicago Suburb) Illinois

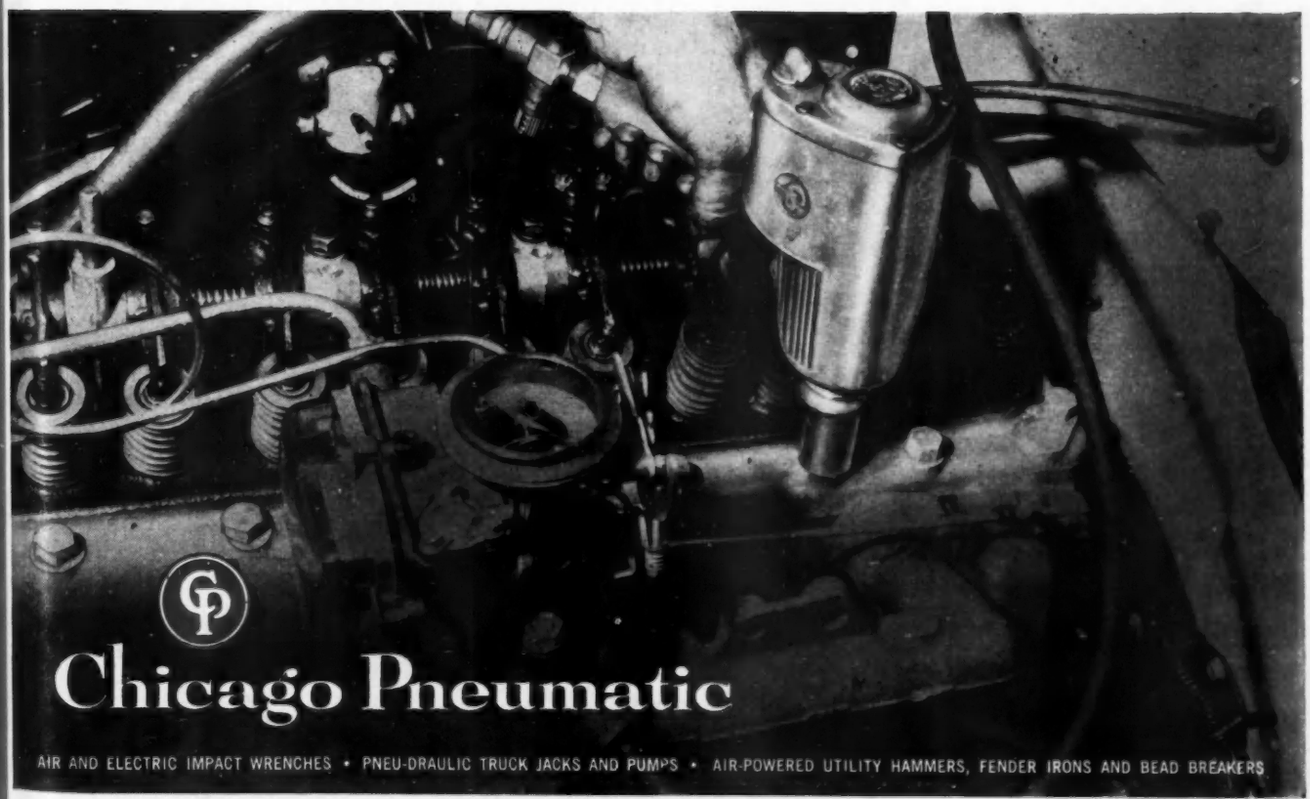
YOU'D NEVER GO BACK TO THIS–



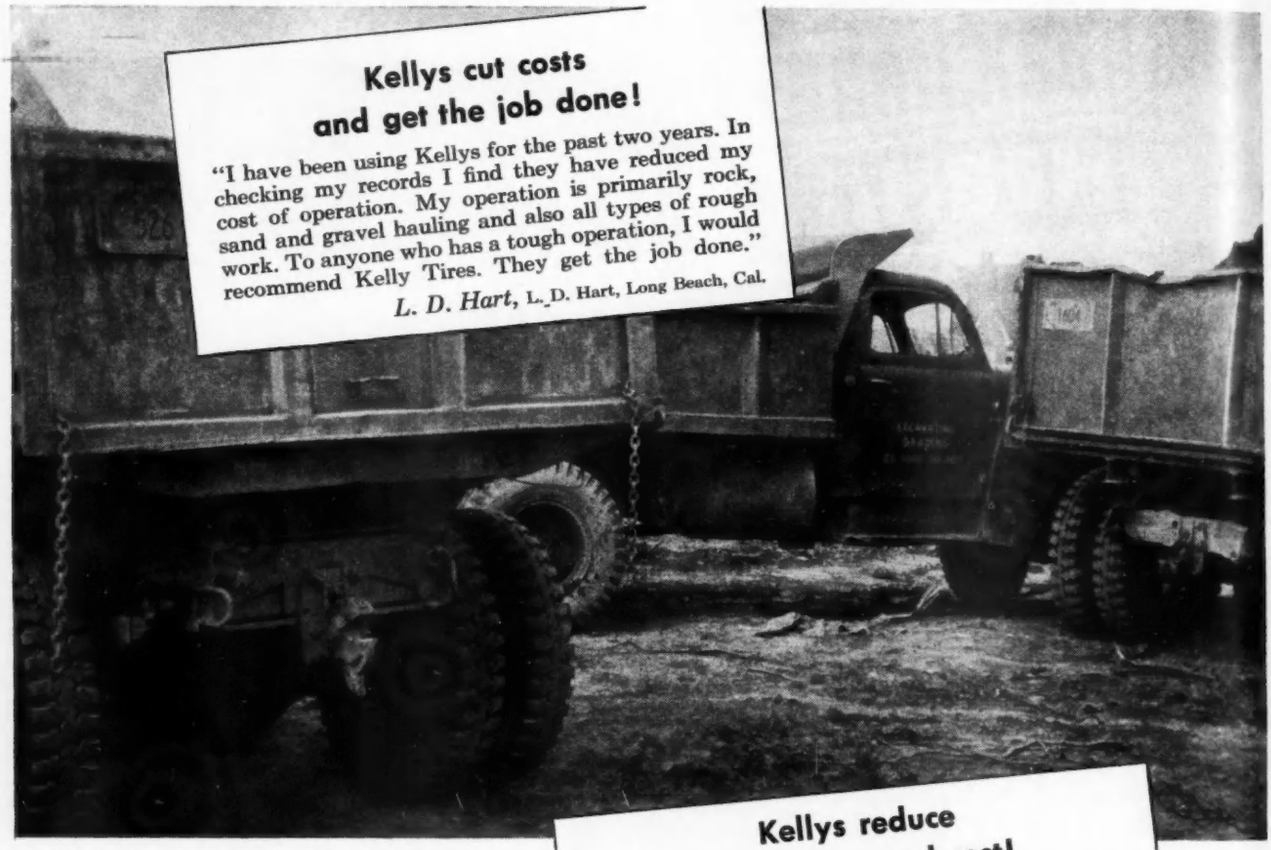
SO WHY CONTINUE THIS–

The era of inflating automobile tires by hand pump has long passed from the American scene. Yet in many service departments, repair shops and garages, men who wouldn't think of hand pumping tires still turn nuts, bolts and screws with hand wrench and screwdriver.

Half of a mechanic's daily productivity is spent running nuts and bolts. By using CP Controllable Air Impact Wrenches you can cut this time 75% – get more billable output per man. Controllable Power is an exclusive Chicago Pneumatic feature which allows the wrench to be preset to run nuts and screws to predetermined tightness, yet have plenty of reserve power when you need it most. They're small in size and easy to handle. Have detachable angle heads to get right at those "tight spots." Available in ½", ⅝", 1" and 1¼" bolt size models. *Chicago Pneumatic Tool Company, 8 East 44th St., N. Y. 17, N. Y.*


Chicago Pneumatic
AIR AND ELECTRIC IMPACT WRENCHES • PNEU-DRAULIC TRUCK JACKS AND PUMPS • AIR-POWERED UTILITY HAMMERS, FENDER IRONS AND BEAD BREAKERS

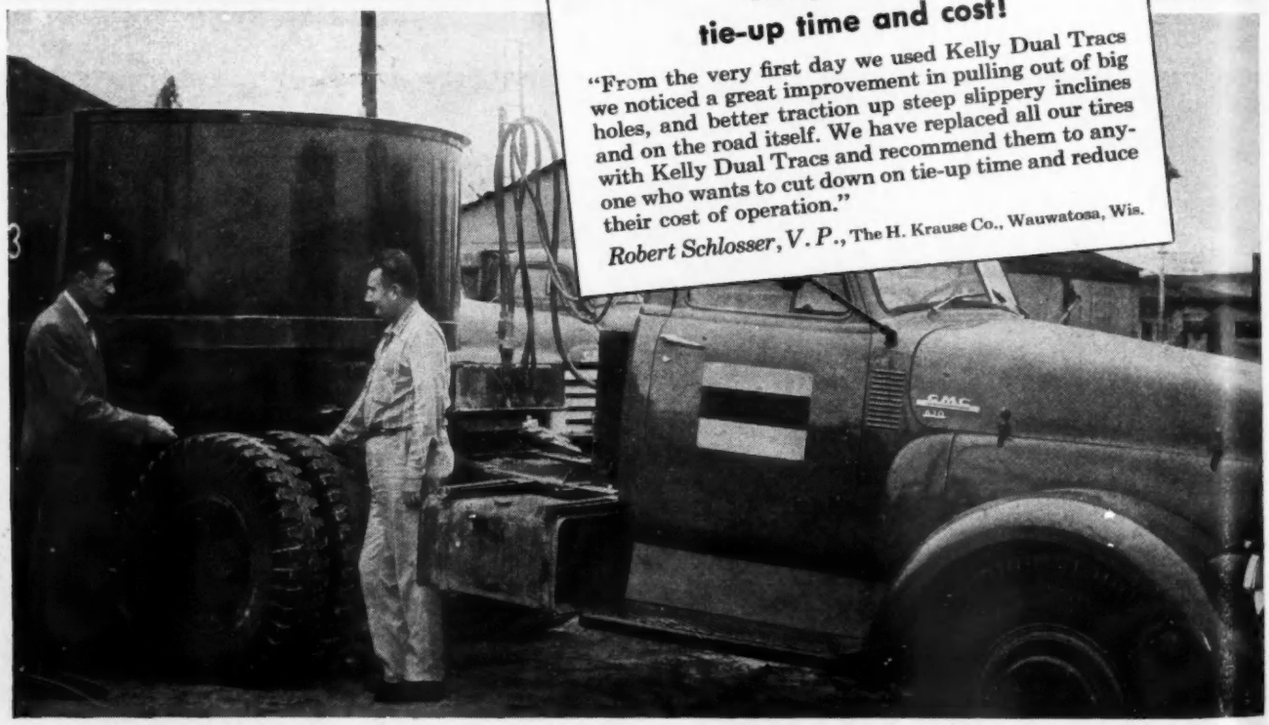
Their own records tell you why— **TRUCKERS**



Kellys cut costs and get the job done!

"I have been using Kellys for the past two years. In checking my records I find they have reduced my cost of operation. My operation is primarily rock, sand and gravel hauling and also all types of rough work. To anyone who has a tough operation, I would recommend Kelly Tires. They get the job done."

L. D. Hart, L. D. Hart, Long Beach, Cal.



Kellys reduce tie-up time and cost!

"From the very first day we used Kelly Dual Tracs we noticed a great improvement in pulling out of big holes, and better traction up steep slippery inclines and on the road itself. We have replaced all our tires with Kelly Dual Tracs and recommend them to anyone who wants to cut down on tie-up time and reduce their cost of operation."

Robert Schlosser, V. P., The H. Krause Co., Wauwatosa, Wis.

there's a tough Kelly for every trucking job

RECOMMEND KELLYS!

Outstanding performance and lower cost-per-mile!

"We have used the Kelly CHT, Truc Trac, and Dual Trac type tires for the past 5 years and have compared with other brands. The performance of Kelly Tires is outstanding and has resulted in lower cost-per-mile. We recommend the use of Kelly Tires in any operation for top performance at minimum cost!"

H. L. Smith, Central Valley Transport, Inc., Bakersfield, Cal.

It's no secret why truckers recommend Kellys so highly! Their own records prove that Kellys give top tire performance under the most rugged load and on- and off-highway conditions . . . and *still* roll up mileage and recap records that mean lower cost-per-mile!

And if you're not getting the same kind of outstanding service from your present tires, it's time you switched to Kellys! These tough, dependable, better-made truck tires can mean important savings in your own operating costs. Write for the facts now! The Kelly-Springfield Tire Company, Cumberland, Maryland.

60th Anniversary

KELLY *Springfield* **TIRES**

Proved and Improved for 60 Years!

TRUC TRAC *Delivery* | SUPER ARMOR TRAC *Highway* | COMMERCIAL *Heavy Tread* | DUAL TRAC *Special Service* | LUG TRAC *Special Service*

NOW...A HIGHWAY TRACTOR THAT HAS EVERYTHING...

THE NEW
DIAMOND T TILT-CAB
MODEL 720C
WITH POWER
STEERING
In addition to Tilt-Cab Models, Diamond T builds a complete line of heavy-duty trucks and tractors from 1 1/2 tons to giant diesel six-wheelers—with specifications to match every kind of service.

This new Tilt-Cab tractor combines every advantage of load capacity, maneuverability, speed, easy handling, light weight and Tilt-Cab engine accessibility

Its price is amazingly low!

This powerful new Diamond T was specifically designed for over-the-highway tractor-trailer operations with tandem axle trailers and payloads to 18 or 20 tons. Users tell us that it outperforms everything in its class . . . and gives exceptional gas mileage even with maximum loads.

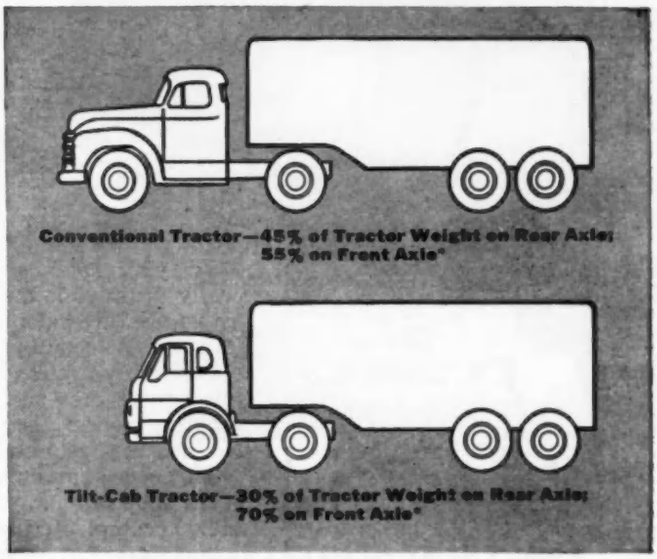
Model 720C standard equipment includes *power steering* . . . new series Diamond T-Continental 427 cu. in., 164 h. p. valve-in-head engine . . . two-speed axle . . . and soft-riding Vari-Rate springs front and rear. A wide range of options is provided—your Diamond T is engineered and custom-built to your exact job requirements.

These TILT-CAB features of the Diamond T 720C will save you money 3 ways!

Diamond T's new Tilt-Cab development gives you three major benefits that save you time and money!

1 CARRY MORE PAYLOAD

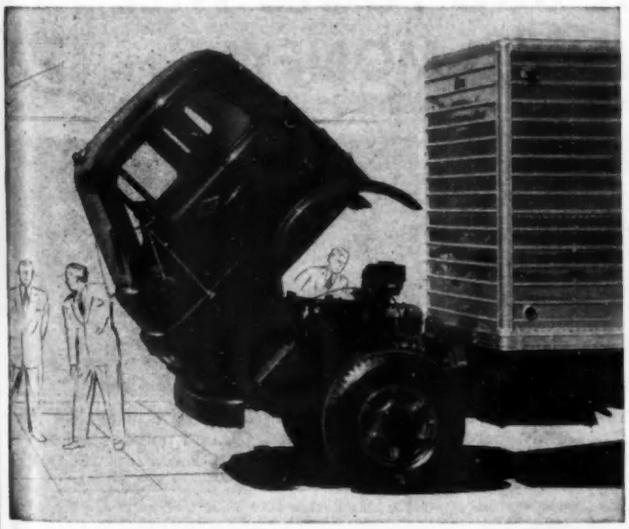
Tilt-Cab design puts more weight on the front axle. You can carry bigger payloads without exceeding the legal limits. That's because the front axle carries about 70% of the chassis weight—more than 1000 lbs. of it has been transferred from the rear axle in these Tilt-Cab models. Furthermore, king-pin position can be advanced so that the front axle carries more of the trailer and payload weight. Over-all gain can exceed 2000 lbs. of payload every trip, and *earning power* is increased accordingly.


Conventional Tractor—45% of Tractor Weight on Rear Axle; 55% on Front Axle*
Tilt-Cab Tractor—30% of Tractor Weight on Rear Axle; 70% on Front Axle*

**approximate—varies with wheelbase and equipment*

2 DESIGNED FOR TRAILERS TO 35 FT. IN LENGTH

Tilt-Cab tractors handle bulkier loads as well as heavier loads—both within common legal restrictions. The short-coupled C.O.E. design takes 35-foot trailers in 45-foot limit states with a couple of feet to spare. Over-all length is reduced with any size of trailer, and maneuverability is immensely better than with all former designs.



3 COMPLETE AND INSTANT ENGINE ACCESSIBILITY

The Tilt-Cab of this great new Diamond T series gives complete engine accessibility in less than 10 seconds, with no plumbing . . . no wiring . . . no troubles. Only in Diamond T is the Tilt-Cab principle *fully* used for your advantage! Tilt the Diamond T Cab and the overhead-valve engine is there—*high in the frame*—for quick, easy, low-cost service. This unequaled accessibility assures a large reduction in service and maintenance time and costs. Trucks are better cared for, more efficient, drivers do a better job.

GET COMPLETE TILT-CAB FACTS NOW!

See your Diamond T Dealer or write Diamond T Motor Car Company, Chicago, for details and prices. Tilt-Cab trucks are available in a complete range from 17,000 to 30,000 lbs. G.V.W. and tractors from 35,000 to 58,000 lbs. G.C.W. These new models are powered by modern overhead-valve engines from 112 to 164 brake horsepower.

DIAMOND T TRUCKS

DIAMOND T MOTOR CAR CO., CHICAGO

GRIND VALVE SEATS FASTER CHEAPER

with your B&D Vibro-Centric* Seat Grinder

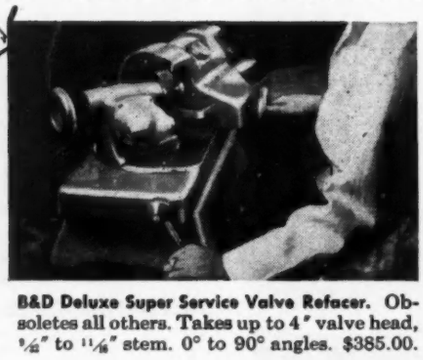
Now, your fleet can benefit from periodic valve reconditioning with costly down time cut to the bone! The Black & Decker Vibro-Centric Valve Seat Grinder does motor reconditioning jobs faster because of its extreme accuracy. Foolproof, it eliminates "repeats".

Positive vibrating action lifts grinding wheel from stone once every revolution, prevents stone loading, reduces stone wear. Concentric grinding action assures correct alignment around entire valve seat. No "rigging" required. Job is done in seconds.

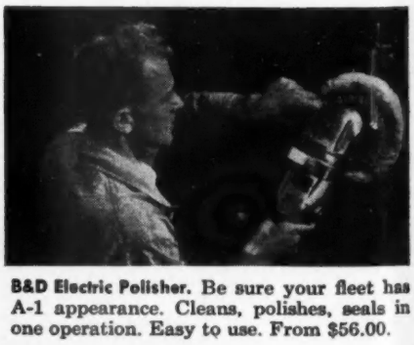
This speed saves fleet owners money! Trucks and buses go in and out of the shop fast . . . yet are kept in top operating condition. Costing only $53.00, complete, the B&D Vibro-Centric soon pays for itself. See it demonstrated at your B&D Distributor. Also investigate other time-, trouble-, and money-saving Black & Decker Portable Electric Tools. Write for catalogs No. 503 and No. 10. Free. Address: THE BLACK & DECKER MFG. CO., 624 Pennsylvania Ave., Towson 4, Md.

ALL THESE B&D TOOLS WILL SAVE YOU MONEY!

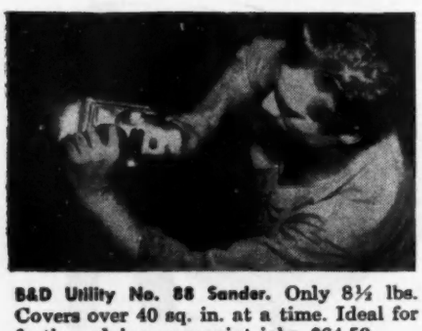
B&D Vibro-Centric Kit. All equipment you need for precision seat grinding in one kit ready for on-the-job use. From $103.00



B&D Deluxe Super Service Valve Refacer. Obsoletes all others. Takes up to 4" valve head, 3/32" to 1 1/16" stem. 0° to 90° angles. $385.00.



B&D Electric Polisher. Be sure your fleet has A-1 appearance. Cleans, polishes, seals in one operation. Easy to use. From $56.00.



B&D Utility No. 88 Sander. Only 8½ lbs. Covers over 40 sq. in. at a time. Ideal for feather-edging on repaint jobs. $64.50.

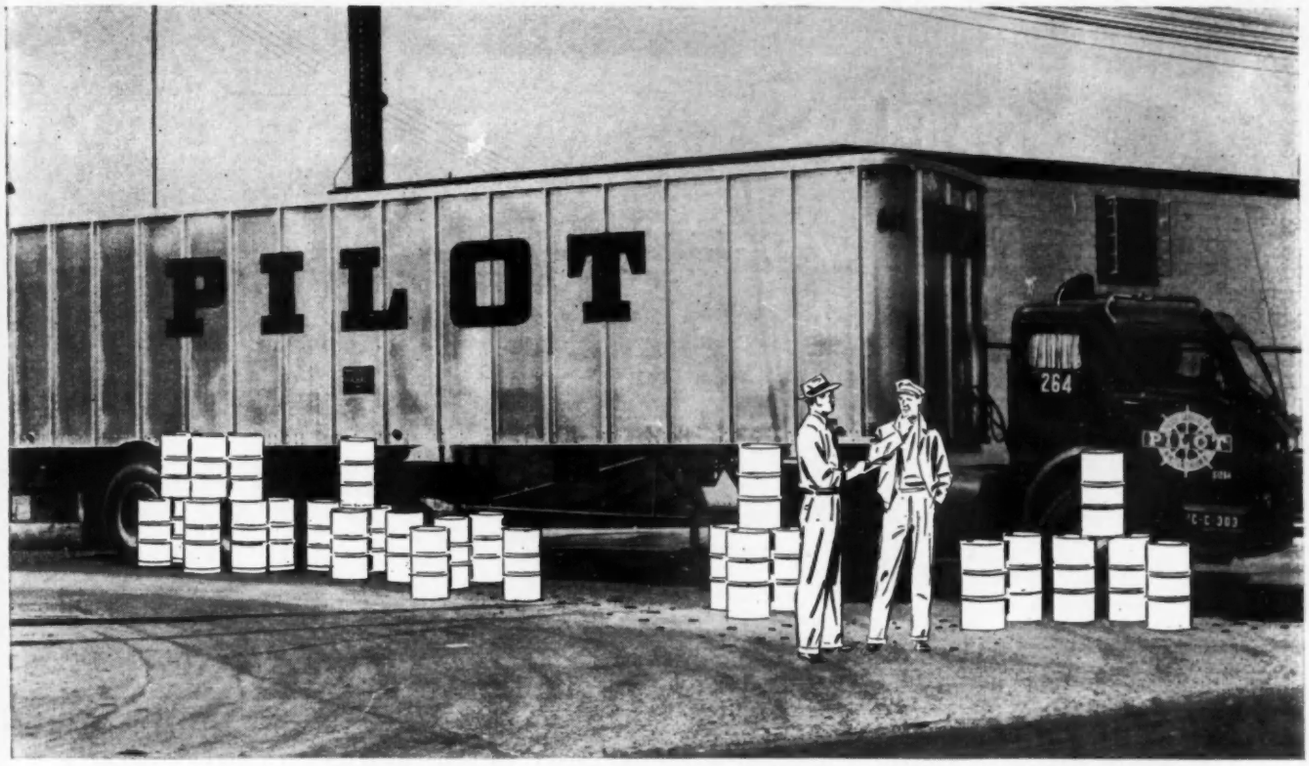
For address of nearest distributor see "TOOLS-ELECTRIC"

LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker

PORTABLE ELECTRIC TOOLS

* Trade Mark Reg. U. S. Pat. Off.



"Alcoa® Aluminum construction lets us carry

3,000 LBS EXTRA PAYLOAD!"

Carolina line carries bigger payload, reduces maintenance and repair costs

Mr. M. H. Wilson, Director of Maintenance for Pilot Freight Carriers, Inc., of Winston-Salem, N. C., says: "Pilot's new aluminum trailers weigh approximately 9,500 lbs, against as much as 12,500 lbs on some of our other trailers.

"Not only can we increase our loads with aluminum trailers, but our repair time and repair costs are both reduced. *All maintenance and rebuilding on the aluminum trailers can be performed quickly and at smaller cost in our own shops!* Aluminum trailers require half as much time and 25% less cost in repair.

"We can repair a tear or dent in an aluminum trailer simply by removing the damaged panel or post and replacing it with a new one. Non-aluminum equipment must be sent out of our garages to be repaired . . . and this is costly and takes time."

Light-but-strong Alcoa Aluminum side panels, wheels, corner posts, flooring, roofs and extruded shapes can give you these same weight-saving, cost-cutting advantages. Ask your equipment manufacturer about trucks and trailers of Alcoa Aluminum—TODAY! ALUMINUM COMPANY OF AMERICA, 1876-B Alcoa Bldg., Pittsburgh 19, Pa.

ALCOA ALUMINUM

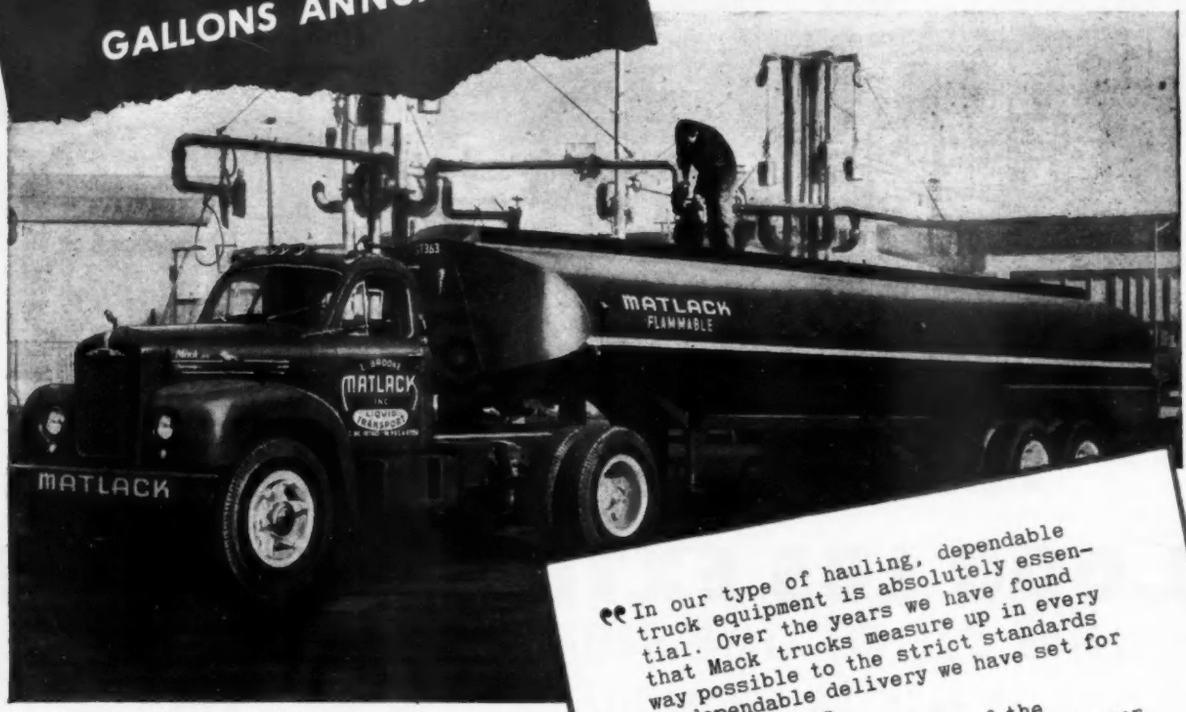
ALUMINUM COMPANY OF AMERICA

ALCOA ON TV brings the world to your armchair with "SEE IT NOW" featuring Edward R. Murrow, Tuesday evenings on most CBS-TV stations.

LIGHT WEIGHT! Alcoa Forged Aluminum Disc Wheels weigh 32 to 50 pounds less per wheel than corresponding steel wheels. Lower unsprung weight means less wear and tear on chassis and tires.

472 MACKS INCLUDING 30 NEW B MODELS HAUL BILLION GALLONS ANNUALLY...

for E. Brooke Matlack, Inc.



"In our type of hauling, dependable truck equipment is absolutely essential. Over the years we have found that Mack trucks measure up in every way possible to the strict standards of dependable delivery we have set for our operations.

"Our latest order for 30 of the new 'B' Model Macks is evidence of our continued satisfaction with Macks."

s/ E. Brooke Matlack, Jr.

we are proud that Matlack uses Macks for its "Pipe Line on Wheels"

Pipe Line on Wheels—that's the registered slogan of E. Brooke Matlack, Inc., Philadelphia, Pa., one of the nation's largest common carriers of liquids in bulk.

And deservedly so. Each month the Matlack fleet of 525 tank trucks—472 of which are Macks—travels over a million miles, transporting more than 95 million gallons of 200 different liquid commodities. Operating in 17 states, Matlack's tankers range south as far as Georgia; west to Indiana and Michigan; north to New Jersey and New York.

Founded in 1888 with horse-drawn vehicles as its first rolling stock, E. Brooke Matlack, Inc. has been buying Mack trucks for close to 40 years. The company's preference for Macks is aptly expressed in the words of E. Brooke Matlack, Jr., which are quoted above.

What Mack trucks are doing for other operators, big and small—they can do for you.

Mack TRUCKS

2189

Mack Trucks, Empire State Building, New York 1, N. Y.
Factory branches and distributors in all principal cities for service and parts. In Canada: Mack Trucks of Canada, Ltd.

The Best Brakes And You Save Money Too!

WADELL TRANSFERMATIC

DOUBLE SPINDLE BRAKE DRUM LATHE

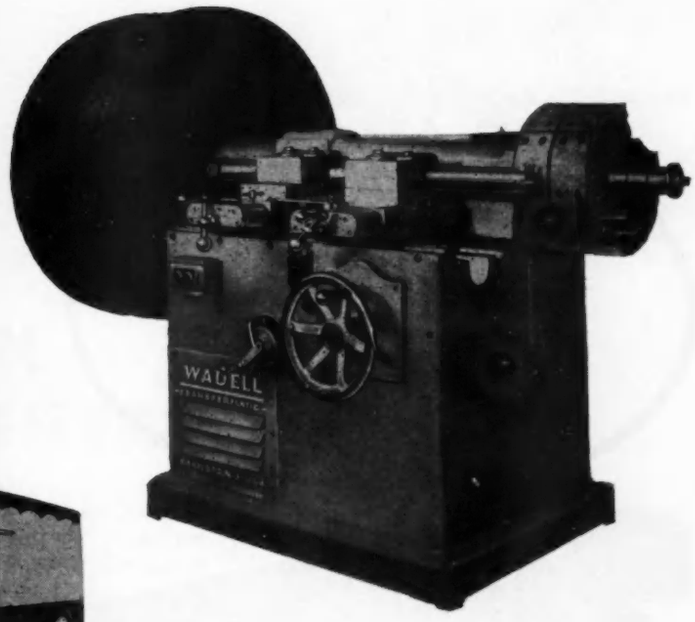
This really heavy duty machine is designed and built around the "Transfermatic" method. This method provides a means of boring the brake drum, and at the same time turning the lining, mounted on the shoes, to the exact diameter of the newly refaced drum. You start out with 100% contact of the brake lining to the drum.

advantages

1. Stock only one oversize brake lining.
2. 100% contact of lining to the drum.
3. Brake drums last longer.
4. Freedom from squeal and noise.

Let us send you more detailed information about the Wadell TRANSFERMATIC Double Spindle Brake Drum Lathe. Fill out the coupon below and mail today.

DESIREABLE TERRITORIES AVAILABLE



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WADELL

EQUIPMENT COMPANY

119 SOUTH AVE. GARWOOD, N. J.

Cut out and attach to your Firm Letterhead.

Gentlemen:

Please send me your FREE literature on the WADELL TRANSFERMATIC address to the attention of:

NAME _____

CCJ-254

DORSEY LIGHTWEIGHT *Champion!*

"BANTAM" in weight

"BRUTE" for strength

In ANY field, you haul more payload in a Dorsey

DELUXE VAN

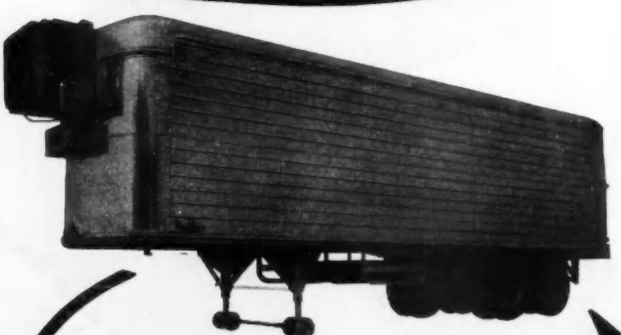
8750 lbs

for fully-standard 32-foot tandem including landing gear, tire carrier, 10:00x20 tires, 18,000-lb. axles and 1⅛" hard pine floor.

PRODUCE VAN

9500 lbs

for completely-equipped 32-foot tandem including ice bunker, engine, blower, ventilators, duct type floor, roof hatches and side door.



REFRIGERATOR VAN

10,550 lbs

actual scale weight of Dorsey Champion tandem 32-ft. Refrigerator Van, complete, including mechanical refrigeration unit and 3" insulation throughout.

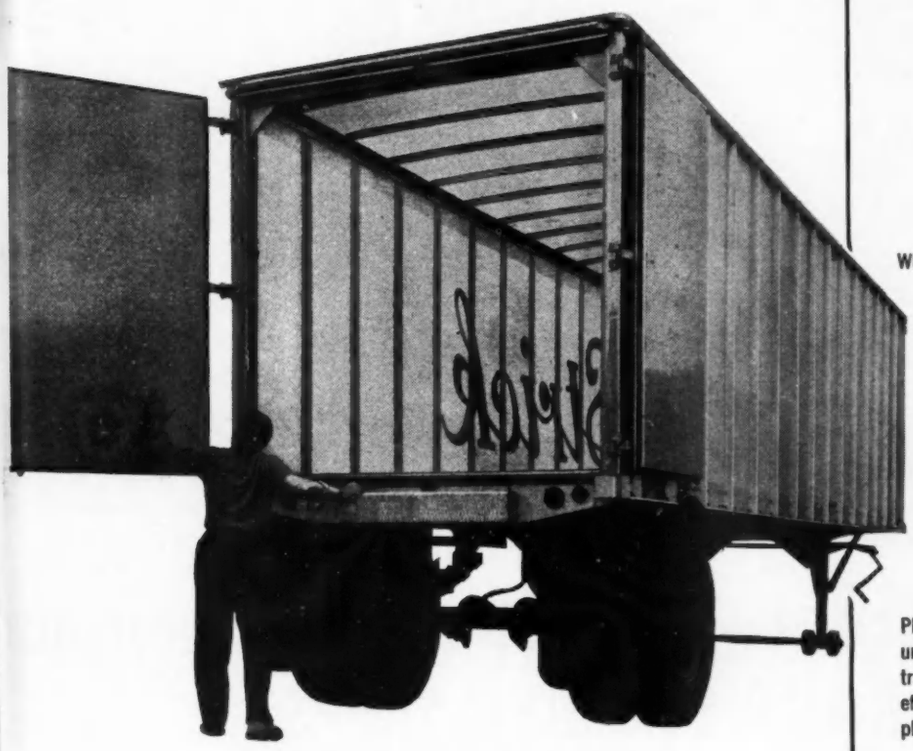
Modern engineering principles and fine materials made the Champion possible: Only the Dorsey Champion utilizes a combination of the stressed-sheet principle plus full X-brace construction. Some other makes use stressed side sheets to support load, and some have X-bracing—but only the Champion builds in extra strength by combining the two. Lighter, yes—but every inch a Dorsey: Dependable as ever! Champion will carry payload, carry it safely—and give long and faithful service, too.

DORSEY TRAILERS SALES-SERVICE

Your Dorsey Distributor is a substantial independent business man with an efficient service organization.

DORSEY TRAILERS ELBA ALABAMA

Tough cargoes are no problem!



THE STRICK PLASTIC FREIGHTER

Have you steered away from hauling chemicals or storage batteries because acids caused rapid deterioration of your equipment? Have you avoided carrying commodities like lampblack because your trailer got so dirty it messed up cargo on the next trip? Then you're ready for the Strick Plastic Freighter.

The Strick Plastic Freighter is made with Strick Reinforced Fiberglas* Plastic. As a result, it has these advantages:

- **it is noncorrosive • it cleans as easily as a pane of glass**
- **it is strong • it is light • it is quickly and inexpensively repaired**
- **it is heat insulating • it is nonelectrolytic • it is impact resistant**

You'll avoid damaged freight claims when you operate the Strick Plastic Freighter, even hauling chemicals, acids, lye, lime, phosphates, lampblack, chickens, hides, storage batteries—hauling any kind of dirty, corrosive cargo. Send for the full story on this new, profitable trailer.

STRICK SETS THE STANDARD OF QUALITY TO WHICH OTHERS ARE COMPARED

Strick COMPANY

*TM OCF Corp.

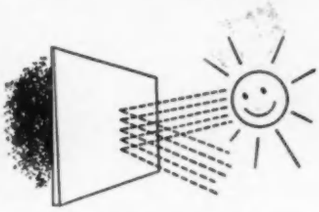
Whitaker Avenue at Godfrey,
Philadelphia 24, Pa.

93rd & Drexel Avenues,
Chicago 19, Ill.

SOME BIG ADVANTAGES OF THE STRICK PLASTIC FREIGHTER

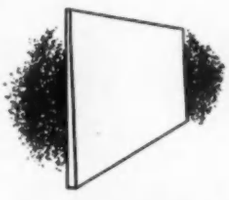
REPAIRABILITY

When cut by a sharp instrument, Strick Plastic can be easily repaired without removing or replacing a panel, and without special tools.



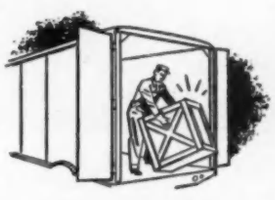
LIGHT ELIMINATION

Plastic sheets let in light for easy loading and unloading. But light can be harmful to the product transported. And it can have such a heating effect as to slow up unloading. There is a Strick plastic that shuts out the light.



STRENGTH

Strick Plastic is molded to maintain minimum weight by providing extra thickness only at lower section where extra strength is needed.

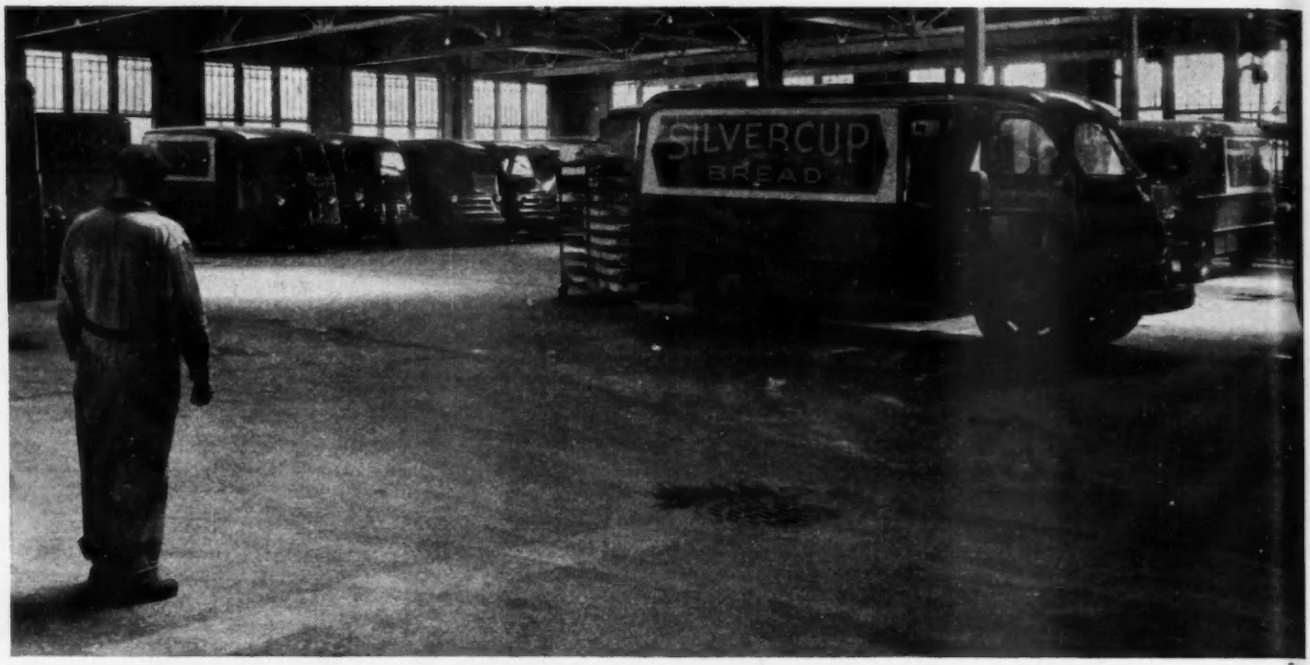


IMPACT RESISTANCE

Strick Plastic has elastic quality—bounces back under heavy blows from cargo.

SEND FOR THE FACTS ABOUT:

The original Strick Exterior Post Aluminum Van
The Strickroof Trailer
The Strick Plastic Lined Reefer
The Strick Tandem



Spacious garage for servicing and housing Gordon's truck fleet.

Gordon Baking Company gets better fleet appearance with DeVILBISS PAINT SHOPS!

In dust-protected DeVilbiss spray booth Gordon's painter applies finish coat with DeVilbiss MBC spray gun.

Scheduled refinishing cuts truck tie-up and delay!

Gordon Baking Company has over 800 fresh, attractive-looking trucks to deliver their Silvercup Bread the day it's baked. Plants are in Long Island City, New York – Chicago, Illinois – Detroit, Michigan.

About every two years each truck is completely refinished. Painting is continuous and includes new body finishing and many touch up jobs. "Down time" . . . man hours . . . inconvenience – all these are reduced by having their own DeVilbiss Paint Shops. These facilities enable Gordon to accurately control service scheduling.

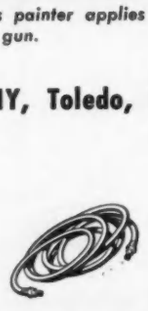
Gordon's complete DeVilbiss Paint Shops include spray booths, spray guns, transformers, hose and connections – top notch equipment to keep trucks on the road longer, looking factory fresh.

Find out how you, too, can profit by doing your own paint work. Your DeVilbiss jobber will be glad to make a survey of your requirements and help you plan a modern, efficient paint shop. Call him, or contact our branch office or factory, today!

THE DEVILBISS COMPANY, Toledo, Ohio Barrie, Ontario • London, England • Santa Clara, Calif.

Air Compressors

Spray Guns



Hose and Connections

Spray Booths

FOR BETTER SERVICE, BUY
DEVILBISS

Branch Offices and Distributors in Principal Cities Throughout the United States, Canada and the World

Now... strongest rayon ever developed for tires gives premium performance at low initial cost

Longer tire life... greater recap possibilities than ever before possible with a rayon tire! That's the news for fleet operators brought about by Du Pont Super Cordura* High Tenacity Rayon. Developed by Du Pont research to meet the demand for a truck tire that gives extra performance at modest initial cost, new "Super Cordura" is up to 20% stronger than conventional rayon tire cord.

Not only extra-strong, "Super Cordura" is also extra flex-resistant. It's engineered to take the tremendous strains of compression-flexing that your tire meets every time the wheel revolves. This added resistance means greater blowout protection, greater mileage . . . whether your fleet highballs cross-country, handles heavy-duty work or local deliveries. And "Super Cordura" has higher wet strength than ordinary rayon to resist the effects of moisture seeping into the body.

Best of all, you can now get premium tire performance at a very modest initial investment. It will pay you to investigate the new possibilities of tire performance with economy offered by new "Super Cordura". Tires made with this high tenacity rayon will soon be available in volume. Ask your dealer about them! E. I. du Pont de Nemours & Co. (Inc.), Textile Fibers Dept., Wilmington 98, Del.

*TRADE-MARK

DU PONT *Super Cordura* TIRE YARN

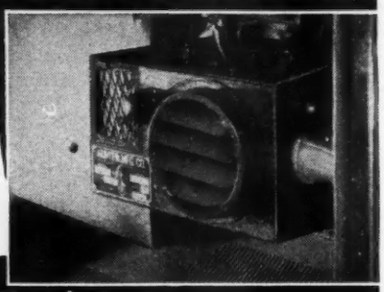
DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

HUNTER

GASOLINE BURNING HEATERS

For Gas and Diesel Rigs



Sure, Safe Heat at Far Less Cost

- Meet ICC Regulations
- Independent of Vehicle Engine
- Eliminate Costly Engine Idling
- Average only 1 Pt. Fuel per Hour
- Sub-zero Starting
- Unfailing Combustion
- Equally Efficient On or Off Road
- Compact, Easily Installed

Write for Bulletin, Complete Information

HUNTER MANUFACTURING CO.

1550 East 17th Street. • Cleveland 14, Ohio

PEE DEE SAYS:

Remember this word

"NYLO-PRENE"

DIAPHRAGMS

You'll be hearing a lot about them

The NYLO-PRENE Diaphragm is exclusive in all P&D Fuel Pumps and assures the driving public of the finest quality and performance ever offered.

P&D Fuel Pumps are manufactured in the most modern and finest equipped plant.

P&D Manufacturing Co., Inc. reputation for building only the highest quality products has been known throughout the Automotive Industry for over thirty-five years.

P&D Ignition Parts are your assurance of top quality—better performance—and satisfied customer acceptance.

GENUINE P&D PARTS

MANUFACTURING CO., INC.

Established 1920

19-02 Steinway St., Long Island City 5, N. Y.

NO-SLACK

In your 5th Wheel, NO-SLACK means: *Better Performance* (smooth starts, smooth pull, no banging and jerking); *Extra Safety* (NO-SLACK 5th Wheel can't lock out or drop the load); *Greater Economy* (the smooth pull cuts maintenance costs on your whole rig, reduces chance of damage to your payload).

Fontaine Truck Equipment Co.
Box 1591 Birmingham 1, Ala.

Write for Folder

The Only **NO-SLACK®** *5th Wheel*

For Safe Operation of Air Brakes

WIG-WAG — Low Air Pressure Indicator

Used for seven years by The Cincinnati Transit Company, Mr. R. Wright, Supt. of Equipment, says:

"The Wig-Wag is standard equipment on all of our motor coaches, trolley buses and on all trucks equipped with air brakes. We have found it to be a very reliable and satisfactory low air alarm."

The WIG-WAG operates entirely by air pressure—no electrical connections. It gives immediate visual warning of unsafe brake pressure.

Add this Safety device to your present equipment. Specify WIG-WAGS, factory installed, on your new buses and trucks.

MONROE STANDARD, INC.

Box 366, Galion, Ohio

Manufacturers of Safety Equipment for Trucks and Buses

CANADIAN DISTRIBUTOR: H. J. MILLER ENTERPRISES LIMITED, 26 QUEEN ST. EAST, TORONTO 1, ONTARIO

I PROMOTE DL HAND CLEANER FOR THOSE QUICK, EASY EXTRA PROFITS!

DL Waterless Handi-cleaner is easy to use and easy to sell . . . *that's why I push it.* It's good for your hands . . . keeps them soft, removes dirt, grease and grime without skin irritation . . . *that's why I use it.* It's good for those extra profits because every motorist is a hot prospect for a quick sale . . . *that's why I push it and display it.*

Packaged in 14 oz., 3 lb., 5 lb., and 5 gal. containers

GET IT FROM YOUR JOBBER

MADE ONLY BY **BANITE CO.** BANITE BLDG., BUFFALO 4, N. Y.

YOCAR ESTAB. 1914

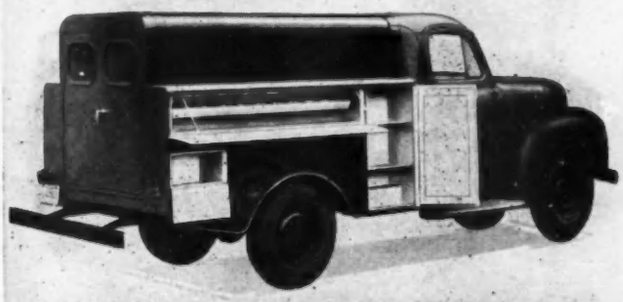
YOUNGSTOWN STEEL CAR CORPORATION

NILES, OHIO

Large scale producers of . . . big weldments on a production basis — die pressed channels for bus, truck and trailer chassis—railway cars, repairs and parts — miscellaneous heavy presswork.

CRAFTSMAN

AMERICA'S BEST BUY IN UTILITY SERVICE TRUCK BODIES



½-TON, ¾-TON, 1-TON, 1½-TON, WITH SINGLE OR DUAL REAR WHEELS

Stahl builds utility bodies for many of America's best known utilities — builds them with unsurpassed precision and care. Look at the advanced engineering and the proved construction features of CRAFTSMAN Utility Service Bodies before you buy.

STAHL METAL PRODUCTS, INC.
3490 W. 140th Street • Cleveland 11, Ohio

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CLASSIFIED ADVERTISEMENTS

FOR SALE—Arcplated GM, WHITE, INTERNATIONAL, CUMMINS, AUTOCAR, WAUKESHA, HALL SCOTT, HERCULES CRANKSHAFTS HARDSURFACED FACTORY STANDARD SIZE. SAVE 25—75% OF COST OF NEW SHAFT. WANTED TO BUY—USED, UNCRACKED CRANKSHAFTS—ANY UNDERSIZE. WRITE FOR COMPLETE INFORMATION AND OUR INDUSTRIAL PRICE SHEET ON HARDSURFACED FACTORY STANDARD SIZE CRANKSHAFTS. AMERICAN CRANKSHAFT COMPANY, CHARLOTTE 1, N. C.

SALESMAN WANTED: Calling on manufacturers of mobile equipment. Full line of cushion seating for tractors, trucks, road machinery, and material handling equipment. National advertising, Rating AAA. Eastern and Western territories now open. Write Box 15, Commercial Car Journal, 5601 Chestnut St., Philadelphia 39, Pa.

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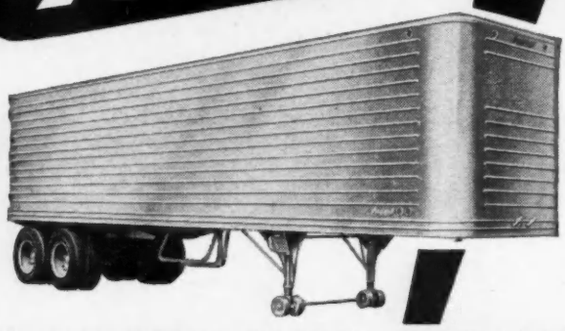
$50-
EXTRA PROFIT
A TRIP



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LIGHTWEIGHT
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this simple inexpensive way!

National
TESTED–APPROVED
VENTILATION SYSTEMS
OVERHEAD–UNDERFLOOR
INSTALL IT YOURSELF

Complete "Packaged Kits" from $206.25
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The National System of Garage Ventilation, Inc.
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ONE TRUCK OR A FLEET
DEKALB IS THE ONE BODY LINE THAT MEETS ALL YOUR REQUIREMENTS!

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COMMERCIAL BODY CORP.
DEKALB, ILLINOIS

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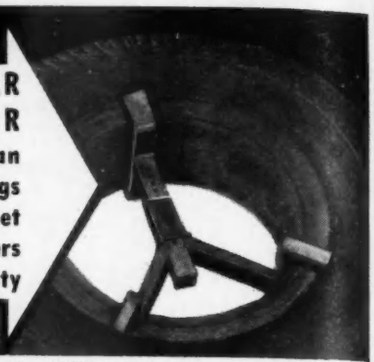

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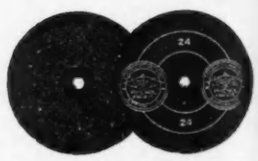

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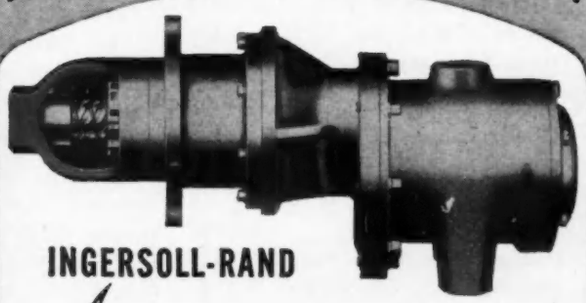

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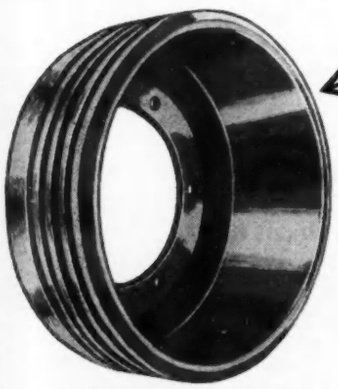

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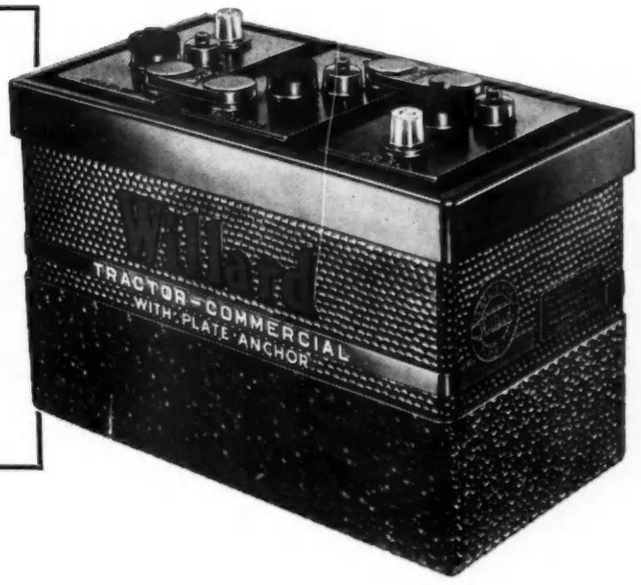

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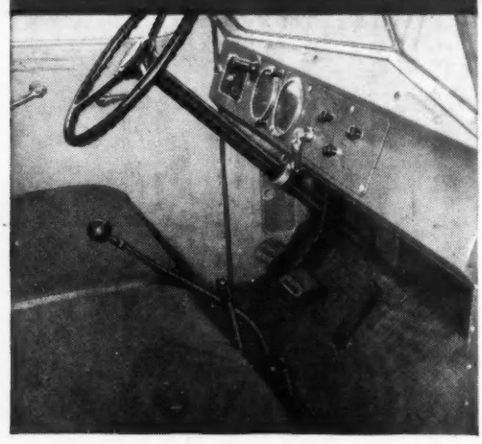

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